

No. 2013-1504, -1505

**In the United States Court of Appeals
For The Federal Circuit**

DDR Holdings, LLC,
Plaintiff-Appellee,

v.

**Hotels.com, L.P., Cendant Travel Distribution Services Group, Inc., Expedia, Inc.,
Travelocity.com, L.P., Site59.com, LLC, International Cruise & Excursion Gallery,
Inc., Ourvacationstore, Inc., Internetwork Publishing Corporation, and
Orbitz Worldwide, LLC,**
Defendants,

and

National Leisure Group, Inc. and World Travel Holdings, Inc.,
Defendants-Appellants,

and

Digital River, Inc.,
Defendant-Appellant.

Appeals from the United States District Court for the Eastern District of Texas in
No. 06-CV-0042, Judge Rodney Gilstrap

OPENING BRIEF FOR APPELLANT DIGITAL RIVER, INC.

Warren S. Huang, *Principal Counsel*
FULBRIGHT & JAWORSKI LLP
1301 McKinney, Suite 5100
Houston, Texas 77010-3095
Telephone: (713) 651-5151
Facsimile: (713) 651-5246
warren.huang@nortonrosefulbright.com

Brett C. Govett, *Of Counsel*
FULBRIGHT & JAWORSKI LLP
2200 Ross Avenue, Suite 2800
Dallas, Texas 75201
Telephone: (214) 855-8000
Facsimile: (214) 855-8200
brett.govett@nortonrosefulbright.com

Counsel for Defendant-Appellant Digital River, Inc.

TABLE OF CONTENTS

	PAGE
CERTIFICATE OF INTEREST	i
TABLE OF AUTHORITIES	iv
STATEMENT OF RELATED CASES	1
STATEMENT OF JURISDICTION.....	1
STATEMENT OF THE ISSUES.....	2
STATEMENT OF THE CASE.....	2
STATEMENT OF FACTS	4
I. Overview of the Asserted Patent Claims	4
II. Overview of Digital River.....	8
SUMMARY OF ARGUMENT	9
ARGUMENT	11
I. Standard of Review	11
II. The District Court Erroneously Declined to Invalidate the Asserted Patent Claims as Indefinite.....	12
A. Overview of Governing Law on Indefiniteness.....	12
B. The Subjective “Look and Feel” Limitations in the Asserted Patent Claims Are Indefinite Because the ‘572 Patent Fails to Provide Any Objective Guidance for Determining When “Look and Feel” Is Achieved.....	14
III. The District Court Erroneously Entered Judgment That the Asserted Patent Claims Are Not Invalid as Anticipated	27

IV. The District Court Erroneously Entered Judgment That the
Asserted Patent Claims Are Not Invalid as Obvious34

V. The District Court Erroneously Entered Judgment That Digital
River Infringed the Asserted Patent Claims.....38

A. Overview of Governing Law on Infringement and Claim
Construction40

B. The Intrinsic Evidence Conclusively Establishes That the
Asserted Patent Claims Cover Systems and Processes
Involving Three Parties Only.....41

C. There Is No Dispute That Digital River’s Accused
Platforms Involve Only Two Parties and, Thus, Do Not
Infringe the Asserted Patent Claims54

CONCLUSION55

CERTIFICATE OF SERVICE57

CERTIFICATE OF COMPLIANCE58

TABLE OF AUTHORITIES

	PAGE(S)
 CASES	
<i>Baldwin Graphic Sys., Inc. v. Siebert, Inc.</i> , 2008 U.S. Dist. LEXIS 82991 (N.D. Ill. Aug. 27, 2008)	22
<i>Brown & Williamson Tobacco Corp. v. Phillip Morris, Inc.</i> , 229 F.3d 1120 (Fed. Cir. 2000)	35
<i>Commil USA, LLC v. Cisco Sys., Inc.</i> , 720 F.3d 1361 (Fed. Cir. 2013)	41
<i>Constant v. Adv. Micro-Devices, Inc.</i> , 848 F.2d 1560 (Fed. Cir. 1988)	32
<i>Cybor Corp. v. FAS Techs., Inc.</i> , 138 F.3d 1448 (Fed. Cir. 1998) (<i>en banc</i>)	40, 41
<i>Datamize, LLC v. Plumtree Software, Inc.</i> , 417 F.3d 1342 (Fed. Cir. 2005)	<i>Passim</i>
<i>Dawn Equip Co. v. Ky. Farms Inc.</i> , 140 F.3d 1009 (Fed. Cir. 1998)	28, 35
<i>EcoLab, Inc. v. Envirochem, Inc.</i> , 264 F.3d 1358 (Fed. Cir. 2001)	26
<i>Ekchian v. Home Depot, Inc.</i> , 104 F.3d 1299 (Fed. Cir. 2007)	49, 52
<i>Elekta Instr. S.A. v. O.U.R. Scientific Int’l</i> , 214 F.3d 1302 (Fed. Cir. 2000)	49, 52
<i>Enzo Biochem, Inc. v. Applera Corp.</i> , 599 F.3d 1325 (Fed. Cir. 2010)	26, 27
<i>Gen. Elec. Co. v. Wabash Appliance Corp.</i> , 304 U.S. 364 (1938)	13

<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	35
<i>Halliburton Energy Servs., Inc. v. M-I LLC</i> , 514 F.3d 1244 (Fed. Cir. 2008)	16
<i>Harris Corp. v. Ericsson Inc.</i> , 417 F.3d 1241 (Fed. Cir. 2005)	11
<i>Honeywell Int’l v. Int’l Trade Comm’n</i> , 341 F.3d 1332 (Fed. Cir. 2003)	12, 13, 19
<i>Johns Hopkins Univ. v. Datascope Corp.</i> , 543 F.3d 1342 (Fed. Cir. 2008)	35
<i>KLA-Tencor Corp. v. Xitronix Corp.</i> , 2011 U.S. Dist. LEXIS 9436 (W.D. Tex. Jan. 31, 2011)	22
<i>KSR Int’l v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	35
<i>LaserDynamics, Inc. v. Quanta Computer, Inc.</i> , 694 F.3d 51 (Fed. Cir. 2012)	11
<i>Leggett & Platt, Inc. v. Vutek, Inc.</i> , 2006 U.S. Dist. LEXIS 93024 (E.D. Mo. Dec. 26, 2006), <i>aff’d</i> , 537 F.3d 1349 (Fed. Cir. 2008).....	22
<i>Markman v. Westview Instr., Inc.</i> , 52 F.3d 967 (Fed. Cir. 1995) (<i>en banc</i>), <i>aff’d</i> , 517 U.S. 370 (1996).....	40
<i>Matlink, Inc. v. Home Depot U.S.A., Inc.</i> , 2008 U.S. Dist. LEXIS 120836 (S.D. Cal. Sept. 18, 2008)	22
<i>Mossman v. Broderbund Software, Inc.</i> , 1999 U.S. Dist. LEXIS 8014 (E.D. Mich. May 18, 1999)	22
<i>Omega Eng’g, Inc. v. Raytek Corp.</i> , 334 F.3d 1314 (Fed. Cir. 2003)	41, 45

<i>Orion IP, LLC v. Hyundai Motor Am.,</i> 605 F.3d 967 (Fed. Cir. 2010)	28
<i>Phillips v. AWH Corp.,</i> 415 F.3d 1303 (Fed. Cir. 2005) (<i>en banc</i>)	40, 41
<i>Rackable Sys., Inc. v. Super Micro Computer, Inc.,</i> 2006 U.S. Dist. LEXIS 81432 (N.D. Cal. Oct. 27, 2006)	16, 22
<i>Romala Stone, Inc. v. Home Depot U.S.A., Inc.,</i> 2007 U.S. Dist. LEXIS 73098 (N.D. Ga. Oct. 1, 2007)	22
<i>Semmler v. Am. Honda Motor Co.,</i> 990 F. Supp. 967 (S.D. Ohio 1997)	23
<i>Springs Window Fashions, LP v. Novo Indus. L.P.,</i> 323 F.3d 989 (Fed. Cir. 2003)	49, 52
<i>Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.,</i> 655 F.3d 1364 (Fed. Cir. 2011)	13
<i>Storm Prods., Inc. v. Ebonite Int’l,</i> 638 F. Supp. 2d 1307 (D. Utah 2009)	13, 22
<i>STX, Inc. v. Brine, Inc.,</i> 37 F. Supp. 2d 740 (D. Md. 1999)	23
<i>Synthes (USA) v. Smith & Nephew, Inc.,</i> 547 F. Supp. 2d 436 (E.D. Pa. 2008)	22
<i>Teva Pharms. USA, Inc. v. Sandoz, Inc.,</i> 723 F.3d 1363 (Fed. Cir. 2013)	13
<i>TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc.,</i> 529 F.3d 1364 (Fed. Cir. 2008)	47
<i>Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.,</i> 699 F.3d 1340 (Fed. Cir. 2012) (cert. filed)	12

Univ. of Rochester v. G.D. Searle & Co.,
375 F.3d 1303 (Fed. Cir. 2004)47

White v. Dunbar,
119 U.S. 47 (1886).....40

STATUTES & RULES

28 U.S.C. § 1295(a)(1).....1

28 U.S.C. § 1338(a)1

35 U.S.C. § 103.....34

35 U.S.C. § 112.....12

SECONDARY AUTHORITIES

BLACK'S LAW DICTIONARY 890 (9th ed. 2009)54

BLACK'S LAW DICTIONARY 1617 (9th ed. 2009)45

WEBSTER'S THIRD INTERNATIONAL DICTIONARY 1180 (1966).....54

WEBSTER'S THIRD INTERNATIONAL DICTIONARY 2378 (1966).....45

STATEMENT OF RELATED CASES

No other appeal in or from the same case in the district court was previously before this or any other appellate court. This Court's decision in this appeal will directly affect the following pending cases: (1) Civil Action No. 2:13-cv-647; *DDR Holdings, LLC v. Digital River, Inc.*; In the United States District Court for the Eastern District of Texas (Marshall Division); and (2) Civil Action No. 2:13-cv-646; *DDR Holdings, LLC v. World Travel Holdings, Inc.*; In the United States District Court for the Eastern District of Texas (Marshall Division).

STATEMENT OF JURISDICTION

The district court had jurisdiction under 28 U.S.C. § 1338(a) because this case involves a patent infringement action brought by Appellee-Plaintiff DDR Holdings, LLC ("DDR") against Appellant-Defendant Digital River, Inc. ("Digital River"). This Court has jurisdiction under 28 U.S.C. § 1295(a)(1) because this is an appeal from a final judgment and an order denying Digital River's Renewed Motion for Judgment as a Matter of Law Pursuant to Federal Rule of Civil Procedure 50(b) and Motion for New Trial Pursuant to Federal Rule of Civil Procedure 59 entered on June 20, 2013. A00001-35 (Add. Tabs 1 & 2).¹ Digital River timely filed its notice of appeal on July 3, 2013. A05056-58.

¹ "A_____" refers to the Joint Appendix. "Add. Tab ____" refers to the Addendum attached to the end of this brief.

STATEMENT OF THE ISSUES

1. Did the district court err in declining to invalidate Claims 13, 17, and 20 of U.S. Patent No. 6,993,572 (“the Asserted Patent Claims”) as indefinite under 35 U.S.C. § 112?

2. Did the district court err in entering judgment that the Asserted Patent Claims are not invalid as anticipated under 35 U.S.C. § 102?

3. Did the district court err in entering judgment that the Asserted Patent Claims are not invalid as obvious under 35 U.S.C. § 103?

4. Did the district court err in entering judgment that Digital River infringed the Asserted Patent Claims?²

5. Did the district court err in denying Digital River's Renewed Motion for Judgment as a Matter of Law Pursuant to Federal Rule of Civil Procedure 50(b) and Digital River's Motion for New Trial Pursuant to Federal Rule of Civil Procedure 59?

STATEMENT OF THE CASE

On January 31, 2006, DDR filed this patent infringement action against

² This issue encompasses any and all other adverse infringement rulings against Digital River, including but not limited to the district court's: (1) construction of the Asserted Patent Claims; (2) overruling of Digital River's objection to specific instructions in the jury charge relating to that construction; and (3) denial of Digital River's motion for summary judgment of non-infringement. Those rulings will be discussed in greater detail below.

In October 2012, DDR proceeded to trial against Digital River and NLG/WTH after settling with the other defendants. A01198-99; A03078-80; A04796-97; A04891-92; A05038-39. DDR limited its infringement claims against Digital River to Claims 13, 17, and 20 of the '572 Patent. A03078-79. Specifically, DDR accused seven Digital River stores on two Digital River

3

platforms of infringing the Asserted Patent Claims. A02993-94; A03586.

The jury returned the following findings in connection with DDR's claims against Digital River and Digital River's defenses to such claims:

- Digital River directly infringed the Asserted Patent Claims.
- Digital River *did not* induce infringement of the Asserted Patent Claims.
- Digital River *did not* willfully infringe the Asserted Patent Claims.
- The Asserted Patent Claims were not invalid as anticipated.
- The Asserted Patent Claims were not invalid as obvious.
- DDR was entitled to a reasonable royalty for Digital River's infringement in the amount of \$750,000.

A03078-80.

Following the verdict, Digital River filed a renewed motion for judgment as a matter of law and motion for new trial challenging the jury's findings and seeking to invalidate the Asserted Patent Claims as indefinite. A04826-27; A04978; A04980. On June 20, 2013, the district court denied Digital River's motions and entered judgment on the verdict, awarding damages, prejudgment and postjudgment interest, and costs. A00001-035 (Add. Tabs 1 & 2).

STATEMENT OF FACTS

I. Overview of the Asserted Patent Claims

In early to mid-1998, Daniel Ross, Sr. (“Ross, Sr.”), Daniel Ross, Jr. (“Ross,

Jr.”), and Joseph Michaels founded a company named Nexchange. A03209-11; A03525. As described by Ross, Jr., Nexchange engaged in “syndicated e-commerce.” A03208; A03270. Merchants would provide Nexchange access to their products, pricing, and other information needed for Nexchange to create a store for the merchants. A03216. Host websites would provide Nexchange a page from their website that exemplified their website’s subjective “look and feel.” *Id.* Nexchange would separate and store various elements from those websites on Nexchange’s servers. A03216-17. The host websites would create links on their websites to products or product categories of merchants they wished to promote. A03217. Visitors to the host websites would click those links and be taken to a website on Nexchange’s system that had the store with the products or product categories they were looking for and that incorporated the host websites’ “look and feel.” A03213-17. When the visitors finished shopping on that webpage, they would “go right back” to the host websites. A03220. Nexchange first made the above services available to the public in October 1998. A03233.

On September 17, 1998, Nexchange filed a provisional patent application seeking to patent the above system and process. A00082; A00122; A00163.⁴ On September 17, 1999, Nexchange filed a regular patent application regarding the

⁴ DDR’s expert testified that the provisional patent application supported Claims 13 and 17 of the ‘572 Patent only. A04562. Thus, the priority date for those claims is September 17, 1998 while the priority date for Claim 20 of the ‘572 Patent is September 17, 1999 (the date the regular patent application was filed). *Id.*

same. *Id.* That application subsequently issued as the ‘135 Patent on September 30, 2003. A00082. The ‘572 Patent, which issued on January 31, 2006, is a continuation of the ‘135 Patent (A00122 / Add. Tab 3); and the ‘399 Patent, which issued on October 19, 2010, is a continuation of the ‘572 Patent (A00163).

Approximately 2-1/2 years after it opened for business, Nexchange – unprofitable and unable to continue operations without additional investment funds – closed its doors in December 2000. A03236-37; A03255; A03561. Following Nexchange’s demise, Ross, Sr., as a creditor of Nexchange, obtained exclusive ownership of Nexchange’s “provisional patents and intellectual property rights,” which would later grow to include the ‘572 and ‘399 Patents when they issued. A03238; A03391; A03432; A03563-64; A07255-56; A07262-64. Ross, Sr. then assigned ownership of the acquired intellectual property to DDR (co-owned by Ross, Sr. and Ross, Jr.), which was created to own and license such intellectual property. A03194-95; A03238; A03391-92; A07278-79.

The Abstract of the '572 Patent generally describes the invention as follows:

An e-commerce outsourcing system and method provides hosts with transparent, context sensitive e-commerce supported pages. The look and feel of a target host is captured for future use. The host is provided with one or more links for inclusion within a page on the host website that correlates with a selected commerce object, which may be contextually related to material in the page. The commerce object can be a product, a product category, or a dynamic selection indicator. Upon activation of the provided link, a visitor computer is served with a page with the look and feel of the host website and with content based upon the associated commerce object. Where the

commerce object is a dynamic selection indicator, the content is selected at the time of activation based upon an analysis of the page containing the activated link.

A00122.⁵

In clarifying what they did and did not purport to invent, Ross, Jr. and Mr. Michaels (two of the patents' named co-inventors) testified that they *did not* invent, *inter alia*, e-commerce outsourcing or matching the look and feel of websites. A03311; A03565; *see also* A04267-68 (undisputed testimony by Digital River's expert that outsourced websites, e-commerce outsource companies, look and feel, look and feel matching, commerce objects, and composite webpages existed before filing of DDR's patents). Instead, Ross, Jr. and Mr. Michaels claimed that the patented invention merely achieved the "look and feel" of host websites in an undefined and subjectively improved manner over the prior art:

- "We invented a way for retailers wanting to sell online to open up their stores on popular websites all around the Internet without letting visitors feel like they were leaving those popular websites, by matching that look and feel *really closely*." A03195.
- "But what really made our – our – our invention special was our ability to capture the *real* look and feel, the overall impression of being on that popular website, and never leaving it, even though you're shopping in a merchant's store." A03206.

⁵ To avoid unnecessary duplication, the specific terms of the Asserted Patent Claims are described in the relevant parts of the argument section below.

- “Q: And what else was unique about how you were doing that? / A: Well, we were doing it in a way that nobody else was able to do. We were actually putting it into a website, *preserving that website’s look and feel*, that *overall experience* with – with *great – great amount of detail* so that the visitor never felt like they were being taken away to another website.” A03208.
- “Q: And what was the innovative part of your technology? What was – what was it that it made it unique and original? / A: Well, you weren’t really able to tell. A typical user wouldn’t notice that they were no longer on the same computers that they were when they were on that host website, right? To – to them, *the overall impression* was that they were still in that host website.” A03215.
- “Q: ... Can you tell us how – you know, why what you were doing was different than what other companies were doing on the Internet at that time in terms of retail? / A: ... But there was nobody that was actually doing what we were doing, which is taking that merchant’s store and putting inside the *real* look and feel of the websites of these popular websites.” A03218.
- “Q: Okay. And looking at this Nexchange model, tell us what was original. ... / A: That whole idea of keeping that – that – that *real* look and feel and putting the – the merchant store into that, that was unique. No one was doing it. People might have talked about the idea of doing this, but nobody had figured out actually how to do it. Our technology worked, and it made this possible.” A03221.
- “A lot of companies claimed that they could match look and feel. The idea wasn’t new. The ability to actually replicate *overall* look and feel was new. It was what we invented.” A03565.

II. Overview of Digital River

Digital River is a leading global e-commerce outsource provider supplying businesses with complete, outsourced e-commerce solutions that include site

development and hosting, order and transaction management, system integration, fulfillment, e-marketing, and customer service. A07092. Digital River was founded in 1994 and is a publicly-traded company on the NASDAQ exchange. A07092; A07095. The Digital River Secure Sales System (“the prior art SSS”) was the first version of Digital River’s e-commerce outsourcing platform that provided a commerce website that replicated features of their clients’ websites. *See infra* at 27. On August 12, 1996, the prior art SSS was operational and had its first commercial sale. *Id.* By August 1997, Digital River had signed up its 500th customer, and, by December 1997 (months before Nexchange’s founding), Digital River had signed up its 1,000th customer. A03945-47.

SUMMARY OF ARGUMENT

The district court’s judgment against Digital River should be reversed because the Asserted Patent Claims are invalid and noninfringed. Regarding Digital River’s invalidity defenses, the district court first erroneously declined to invalidate the Asserted Patent Claims as indefinite where the required “look and feel” limitations of those claims are purely subjective. Both the district court’s construction of those claims and the patent’s specification fail to provide objective guidance in determining whether such limitations were disclosed in the prior art and in notifying members of the public what systems and processes fall within the scope of those claims. Absent an “objective anchor” for understanding and

applying the Asserted Patent Claims, this Court and other courts have repeatedly invalidated similarly subjective patent claims as indefinite.

Alternatively, if this Court concludes that all of the terms of the Asserted Patent Claims are somehow capable of meaningful construction (which they are not), the district court erroneously entered judgment that such claims are not invalid as anticipated. Digital River presented clear and convincing evidence that every limitation of the Asserted Patent Claims was previously disclosed in the prior art SSS, and DDR failed to present substantial evidence to the contrary.

Further in the alternative, the district court erroneously entered judgment that the Asserted Patent Claims are not invalid as obvious where Digital River presented clear and convincing evidence that inclusion of the only limitation allegedly missing in the prior art SSS – the purely subjective “look and feel” limitations – would have been obvious to a person of ordinary skill in the art to the extent those limitations are even susceptible to a definite construction. This holds particularly true where the named inventors repeatedly testified that their alleged invention merely achieved the required “look and feel” limitations *better* than the prior art in some undefined and unquantifiable manner.

Finally, the district court erroneously entered judgment that Digital River’s accused platforms infringed the Asserted Patent Claims where the express and unambiguous language of the patent’s claims, specification, and re-examination

history conclusively establish that such claims only encompass systems and processes involving *three* parties – a host, merchant, and e-commerce outsource provider. There is no dispute, however, that Digital River’s accused platforms involve only *two* parties – either: (1) an e-commerce outsource provider and merchant; or (2) a party selling its own goods (whether that party is called a host or merchant) and e-commerce outsource provider. Furthermore, to the extent the patent’s specification purports to disclose a two-party embodiment of the invention in which the host and merchant are the same party, DDR disclaimed any such embodiment during the post-suit reexamination of the Asserted Patent Claims.

The district court's judgment against Digital River should be reversed.

ARGUMENT

I. Standard of Review

The denial of a motion for JMOL is reviewed *de novo*. See, e.g., *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1248 (Fed. Cir. 2005) (applying Fifth Circuit precedent). JMOL is appropriate if “the facts and inferences point so strongly and overwhelmingly in favor of one party that the court concludes that reasonable jurors could not arrive at a contrary verdict.” *Id.*

The denial of a motion for new trial is reviewed for abuse of discretion. *See, e.g., LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 66 (Fed. Cir. 2012) (applying Fifth Circuit precedent). A new trial is appropriate if the jury’s

The first independent basis for reversing the district court’s judgment against Digital River is the district court’s erroneous denial of Digital River’s renewed motion for JMOL on the ground that the Asserted Patent Claims are invalid as indefinite under 35 U.S.C. § 112(b). As shown below, the term “look and feel” in the Asserted Patent Claims is “insolubly ambiguous” and, thus, indefinite.

The definiteness requirement is set forth in 35 U.S.C. § 112(b), which states that “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” The definiteness requirement “focuses on whether the claims, as interpreted in view of the written description, adequately perform their function of notifying the public of the [scope of the] patentee’s right to exclude.” *Honeywell Int’l v. Int’l Trade Comm’n*, 341 F.3d 1332, 1338 (Fed. Cir. 2003). Because the inventor “must inform the public of the limits of the monopoly asserted,” the indefiniteness of a single phrase in a claim renders that claim and every claim that depends from it invalid as a matter of law. *See, e.g.,*

Gen. Elec. Co. v. Wabash Appliance Corp., 304 U.S. 364, 369 (1938); *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350-51 (Fed. Cir. 2005).

As a general matter, claims are indefinite when they are: (1) “not amenable to construction”; or (2) “insolubly ambiguous.” *See, e.g., Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 723 F.3d 1363, 1368 (Fed. Cir. 2013); *Datamize, LLC*, 417 F.3d at 1347. A construed claim is “insolubly ambiguous” if “it fails to provide sufficient clarity about the bounds of the claim to one skilled in the art.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1373 (Fed. Cir. 2011); *see also Teva Pharms. USA, Inc.*, 723 F.3d at 1368 (same). Claims must “clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise.” *Datamize, LLC*, 417 F.3d at 1347.

Despite the presumption that patents are valid, courts cannot rewrite patent claims in order to render them definite. *See, e.g., Honeywell Int’l*, 341 F.3d at 1341. Moreover, the ability of a court to construe a claim in some manner does not render the claim definite unless such construction is supported by the evidence. *See Storm Prods., Inc. v. Ebonite Int’l*, 638 F. Supp. 2d 1307, 1316 (D. Utah 2009) (rejecting attempt to overcome indefiniteness of claim based on construction not grounded in intrinsic or extrinsic evidence / “[I]nsolubly ambiguous’ does not mean that there is no possible construction that could cure a claim’s ambiguity, it means that there is no such construction that is supported by the evidence”).

In determining whether a claim is indefinite, general principles of claim construction apply. *See, e.g., Datamize, LLC*, 417 F.3d at 1348. Courts may consider intrinsic evidence (*e.g.*, the claims themselves, the specification, and the patent’s file history) as well as extrinsic evidence. *Id.* The determination whether a claim is indefinite is a question of law that is reviewed *de novo*. *Id.* at 1347.

B. The Subjective “Look and Feel” Limitations in the Asserted Patent Claims Are Indefinite Because the ‘572 Patent Fails to Provide Any Objective Guidance for Determining When “Look and Feel” Is Achieved

The term “look and feel” is an essential limitation in each of the Asserted Patent Claims. Claim 13 states:

13. An e-commerce outsourcing system comprising:
 - a) a data store including a *look and feel* description associated with a host web page having a link correlated with a commerce object; and
 - b) a computer processor coupled to the data store and in communication through the Internet with the host web page and programmed, upon receiving an indication that the link has been activated by a visitor computer in Internet communication with the host web page, to serve a composite web page to the visitor computer with a *look and feel* based on the *look and feel* description in the data store and with content based on the commerce object associated with the link.

A00162 (emphasis added). Claim 17 states:

17. An e-commerce outsourcing process comprising the steps of:

- a) storing a *look and feel* description associated with a first website in a data store associated with a second website;
- b) including within a web page of the first website, which web page has a *look and feel* substantially corresponding to the stored *look and feel* description, a link correlating the web page with a commerce object; and
- c) upon receiving an activation of the link from a visitor computer to which the web page has been served, serving to the visitor computer from the second website a composite web page having a *look and feel* corresponding to the stored *look and feel* description of the first website and having content based on the commerce object associated with the link.

Id. (emphasis added). Claim 20, a dependent claim of Claim 17, states:

20. The process of claim 17 wherein the ***look and feel*** description comprises data defining a set of navigational links, used on at least some of the web pages of the first website, each of which links to specific web pages of the first website.

Id. (emphasis added). As shown above, all of the Asserted Patent Claims incorporate the requirement that the e-commerce outsource provider/second website store and serve the “look and feel” of the host/first website.

Based on language in the patent’s specification, the district court in this case approved the parties’ agreed construction of the term “look and feel” to mean “[a] set of elements related to visual appearance and user interface conveying an overall appearance identifying a website; such elements include logos, colors, page layout, navigation systems, frames, ‘mouse-over’ effects, or others [sic] elements

consistent through some or all of the website.” A00542; A01044; A01062.⁶ The terms “look and feel” and “an overall appearance identifying a website,” however, are indefinite where nothing in the patent’s claim language, specification, or file history provide any objective guidance as to how and when those terms are achieved. As this Court succinctly stated in *Datamize*: “While beauty is in the eye of the beholder, a claim term, to be definite, requires an objective anchor.” 417 F.3d at 1350; *see also id.* at 1351 (“[W]hen faced with a purely subjective phrase like ‘aesthetically pleasing,’ a court must determine whether the patent’s specification supplies some standard for measuring the scope of the phrase”).

Specifically, nothing in the patent's language, specification, or file history

6 It is well-established that a claim term may be indefinite even if it is amenable to construction. *See, e.g., Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) (“Even if a claim term’s definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope”); *Datamize, LLC*, 417 F.3d at 1350-51 (“While beauty is in the eye of the beholder, a claim term, to be definite, requires an objective anchor. Thus, even if we adopted a completely subjective construction of ‘aesthetically pleasing,’ this would still render the ‘137 patent invalid”); *Rackable Sys., Inc. v. Super Micro Computer, Inc.*, 2006 U.S. Dist. LEXIS 81432, at *19-*22 (N.D. Cal. Oct. 27, 2006) (holding that term “intermittent” was indefinite where parties’ definitions of term were themselves indefinite). While DDR made much ado over Digital River’s agreement to the above construction of “look and feel” in the district court, Digital River merely did so in the alternative and expressly subject to and without waiving its argument that the term is indefinite. A00542 (“Defendants reserve the right to argue that the term ‘look and feel’ is indefinite and offer this definition in the alternative”). Digital River requested leave to file a motion for summary judgment on indefiniteness, but the district court denied leave to do so. A08836; A08855.

identifies any objective test or standard for determining how and when a “look and feel” or “overall appearance identifying a website” is achieved. The district court’s construction of “look and feel” merely contains a non-exclusive list of elements that may be considered such as “logos, colors, page layout, navigation systems, frames, ‘mouse-over’ effects, or others [sic] elements consistent through some or all of the website.” A01062. The intrinsic evidence fails to explain: (1) how many and what combination of the listed elements must be present in order to achieve the required “look and feel” or “overall appearance identifying a website”; and (2) in what manner the listed elements should be applied. *See Datamize, LLC*, 417 F.3d at 1352-54 (holding that term “aesthetically pleasing” was indefinite notwithstanding specification’s and patentee’s expert’s listing of different parameters for determining what is “aesthetically pleasing”).

The Asserted Patent Claims are also indefinite because no objective test or standard for determining whether the required “look and feel” or “overall appearance identifying a website” exists is even possible. For example, assume the patent or district court established a bright-line rule requiring an e-commerce outsource provider to store and serve at least two of the listed “look and feel” elements in order to satisfy the Asserted Patent Claims’ “look and feel” limitations. Such a rule still may be insufficient to determine if the required “look and feel” or “overall appearance” has been achieved if: (1) the host website has a complicated

design with no dominating “look and feel” elements such that the storage and serving of two of the listed “look and feel” elements fails to establish “an overall appearance identifying” the host website; or (2) the host website has a simple design with a single dominant “look and feel” element (*e.g.*, the Google logo on Google’s home page) and the two listed “look and feel” elements stored and served are secondary elements like color and navigation systems.

Similarly, the district court’s definition of “look and feel” as “overall appearance identifying a website” is anything but objective on its face where there is no principled basis for determining whether an “overall appearance” of the host website has been achieved. Digital River presented evidence at trial that the determination whether its prior art SSS achieved the “look and feel” of its clients’ websites was ultimately determined not by objective metrics but whether its clients subjectively *believed* that an “overall similarity in look and feel” had been achieved. A04206-08; A04219-20. If anything, the purely subjective beliefs of Digital River’s clients and visitors to those clients’ websites (rather than any objective test or standard) are arguably the only legitimate test or standard for determining whether “look and feel” has been achieved, especially where DDR admits that the purpose of “look and feel” is to convince visitors that they are still on the host’s website. *See supra* at 7-8. Thus, the Asserted Patent Claims cannot serve their required function of notifying parties like Digital River whether their

accused platforms fall within the scope of such claims where Digital River’s clients and visitors to the those clients’ websites could find that “look and feel”: (1) has been achieved by storing and serving just one of the listed “look and feel” elements; or (2) has not been achieved despite storing and serving multiple listed “look and feel” elements. *See, e.g., Honeywell Int’l*, 341 F.3d at 1338.

Indeed, when asked to opine whether Digital River’s prior art SSS rendered the Asserted Patent Claims invalid as anticipated or obvious, DDR’s expert failed to cite any objective basis for his opinion that such prior art did not achieve the required “look and feel.” Instead, he arbitrarily pointed to different “look and feel” elements that were or were not found in the two webpages being compared. A03591-93; A03641-42; A03645-57. In fact, DDR’s expert confirmed that the Asserted Patent Claims are indefinite when he acknowledged that such claims merely require some unspecified degree of “look and feel” less than an “exact[]” or “perfect” match and that his opinions on “look and feel” were purely subjective:

A: Actually, what I said is that the two websites are substantially similar. And that's the requirement of the patent, not that they be exactly matching.

Q: Well, how would we know, sir, whether they have the same look and feel?

A: They appear to me to have the same look and feel.

Q: So to your eyes, they have the same look and feel?

A: That's correct.

A03725; *see also* A03719 (acknowledging that Microsoft website and Digital River's accused Microsoft store were not exactly the same / "Q: In fact, they're not a perfect match, are they? / A: No. They don't have to be a perfect match").

The lack of any objective basis in the intrinsic evidence for the jury to determine whether DDR’s expert’s testimony (or Digital River’s expert’s controverting testimony) was correct renders the Asserted Patent Claims indefinite. This was not a routine clash of the experts that the jury was free to resolve as the trier of fact. That a jury might accept one expert’s subjective belief as to whether a particular webpage did or did not match another webpage’s “look and feel” to a sufficient degree does not change the fact that the term is inherently subjective. The public has no principled way to determine in advance whether a jury might conclude that the patent has been infringed. Furthermore, absent an objective test or standard, this Court cannot engage in a principled review of the jury’s implicit findings that Digital River’s prior art SSS did not (and Digital River’s accused platforms did) store and serve a host website’s “look and feel” without this Court improperly substituting its own purely subjective beliefs as to whether “look and feel” and “overall appearance” of the host website have been achieved.

Ironically, DDR, not Digital River, ultimately presented the most powerful case that the Asserted Patent Claims are indefinite. During its opening statement at trial, DDR attempted to distinguish the “look and feel” allegedly achieved by the

claimed invention from the “look and feel” achieved by Digital River’s prior art SSS by asserting over and over again (nine separate times) that the prior art allegedly failed to achieve “*real*” “look and feel.”⁷ Ross, Jr. – the co-inventor of the ‘572 Patent and co-owner of DDR – then ran with this description, not only repeatedly describing the claimed invention’s “look and feel” as “*real*” “look and feel” but describing prior art systems’ “look and feel” as “*fake*” “look and feel”:

Q: And – but what was unique about your invention ...

A: ... But what really made our – our – our invention special was our ability to capture the *real* look and feel, the overall impression of being on that popular website, and never leaving it, even though you're shopping in a merchant's store.

A03206.

Q: The reason you were using the word real in your direct examination is to try to distinguish yourself from the Digital River prior art, which came before you, correct, sir?

A: No. I was trying to make sure we understood we weren't trying to – we wanted to make it look like the look and feel, not – not like some other site or some other thing.

Q: Well, I understand.

⁷ See, e.g., A03152 (“These examples just show that Digital River was not matching the *real* look and feel of its customers’ sites back then”); A03157 (“Digital River will keep saying they did it first no matter what the evidence is. But the evidence will show they never matched the *real* look and feel of a customer’s site until later.”).

Software, Inc. is virtually on all fours with this case, notwithstanding the district court’s one-sentence dismissals of that case as distinguishable. A00007; A00042. The patent in *Datamize* disclosed a software program that allows a person to author user interfaces for electronic kiosks. *Datamize*, 417 F.3d at 1344. Specifically, “[t]he authoring system enables the user interface for each individual kiosk to be customized quickly and easily within wide limits of variation, yet subject to constraints adhering the resulting interference to good standards of aesthetics and user friendliness.” *Id.* The issue in *Datamize* was the definiteness of the patent term “aesthetically pleasing.” *Id.* at 1345.

In defense of the definiteness of “aesthetically pleasing,” the plaintiff argued that “a claim term need not be subject to a single, objective definition to be definite but rather may include a subjective element” and that “subjective terms are permissible so long as one of ordinary skill in the art would understand their scope.” *Id.* at 1349. This Court rejected that argument, observing that the claim in question required that the look and feel of the interface screens actually be “aesthetically pleasing.” *Id.* at 1350. This Court concluded that the plaintiff failed to offer any “objective definition identifying a standard for determining when an

follow” was indefinite); *STX, Inc. v. Brine, Inc.*, 37 F. Supp. 2d 740, 753-56 (D. Md. 1999) (holding that “improved handling and playing characteristics” was indefinite); *Semmler v. Am. Honda Motor Co.*, 990 F. Supp. 967, 974-75 (S.D. Ohio 1997) (holding that “considerable fuel savings” was indefinite).

interface screen is ‘aesthetically pleasing.’” *Id.* Absent “a workable objective standard,” this Court observed that “‘aesthetically pleasing’ does not just include a subjective element, it is completely dependent on a person’s subjective opinion.” *Id.* This Court further made clear that “[t]he scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention” because it “would not notify the public of the patentee’s right to exclude since the meaning of the claim language would depend on the unpredictable vagaries of any one person’s opinion ...” *Id.*

Comparable to the list of exemplary “look and feel” elements identified in the patent specification and incorporated into the district court’s construction of “look and feel” in the present case, this Court noted that the patent specification in *Datamize* provided examples of aesthetic features and choices such as button styles and sizes, window borders, color combinations, and type fonts. *Id.* at 1352. This Court also noted that the plaintiff’s expert identified a list of parameters that one skilled in the art might reference when attempting to determine whether an interface screen is “aesthetically pleasing,” including “symmetry, consistency, predictability, simplicity, cleanliness, and non-crowdedness.” *Id.* at 1353-54. According to the plaintiff’s expert, “one of ordinary skill in the art . . . would understand the claims and be able to determine whether their own work was or was not covered by the claims in question” based on such factors. *Id.* at 1354.

While acknowledging that indefiniteness does not depend on the difficulty experienced by a particular person in comparing the claims with the prior art or the claims with allegedly infringing products or acts, this Court nevertheless rejected the above argument against indefiniteness as well. *Id.* This Court specifically ruled that the plaintiff’s expert’s list of parameters was not sufficient to render the term “aesthetically pleasing” definite where the patent specification failed to explain “how the parameters should be evaluated or weighed to reach the conclusion that an interface screen is ‘aesthetically pleasing.’” *Id.*

Datamize dictates that the term “look and feel” in the Asserted Patent Claims is also indefinite. Like “aesthetically pleasing,” “look and feel” and the district court’s construction of such term to mean “overall appearance identifying a website” are purely subjective terms relating to the overall appearance of a computer-generated screen of information. Moreover, “look and feel” and “overall appearance identifying a website” are just as, if not more, subjective than “aesthetically pleasing” where they merely require an undefined *degree* of “look and feel” (as opposed to a carbon copy of the host’s website) to be stored and served. A03719; A03725 (testimony by DDR’s expert that webpages need only be “substantially similar” and “don’t have to be a perfect match”).

Additionally, as this Court concluded in *Datamize*, merely identifying a list of “look and feel” elements without providing an objective test or standard to

determine how many and what combination of such elements are necessary to establish the claimed “look and feel” is not enough to avoid indefiniteness. In short, like the “aesthetically pleasing” limitations in *Datamize*, the “look and feel” limitations in this case are indefinite because they are “completely dependent on a person’s subjective opinion.” *Datamize*, 417 F.3d at 1350.

In this case, the district court improperly ruled that: (1) “[a] comparison of visual elements according to the Court’s construction between a pair of websites is precisely the type of infringement question for the trier of fact to decide” and “does not render the jury’s decision subjective”; and (2) “claims need not have mathematically precise boundaries so long as the patent gives examples and general guidelines.” A00008. But those rulings cannot be reconciled with *Datamize* and the undisputed evidence that the claim limitations in question are purely subjective and lack any “objective anchor.” Of the two Federal Circuit decisions that the district court cited in support of the above rulings, *EcoLab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358 (Fed. Cir. 2001) did not involve the assertion of an indefiniteness defense and *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325 (Fed. Cir. 2010) involved a claim term whose definiteness was supported by extensive, detailed, and objective intrinsic evidence of how the claim term at issue should be construed. No such evidence exists in this case.

Accordingly, this Court should reverse the district court's denial of Digital

River's indefiniteness defense (which is reviewed *de novo*), declare the Asserted Patent Claims invalid, and hold that Digital River is entitled to judgment as a matter of law on all of DDR's claims on this ground alone.

III. The District Court Erroneously Entered Judgment That the Asserted Patent Claims Are Not Invalid as Anticipated

Alternatively, if the Asserted Patent Claims are not invalid as indefinite, then the district court erroneously entered judgment that such claims are not invalid as anticipated based on Digital River's prior art SSS. *See Enzo Biochem, Inc.*, 599 F.3d at 1332-40 (holding that patent was invalid as anticipated after holding patent was not indefinite). Digital River's prior art SSS – the first version of Digital River's e-commerce outsourcing platform that provided a commerce website replicating features of a host website – was operational and had its first sale on August 12, 1996, with additional use and sales of the prior art SSS thereafter.⁹ DDR, however, did not file the provisional patent application for the '135 Patent (of which the '572 Patent is a continuation patent) until September 17, 1998 – more than two years later. A00122. Thus, even if their “look and feel” limitations are capable of meaningful construction (which they are not), the Asserted Patent Claims are invalid as anticipated where Digital River presented clear and

⁹ See, e.g., A03920-21; A03948-49; A03975; A04270-71; A04319; A04328; A04347; A04359-60; A06195-266; A06267-303; A06618-23; A06691; A07002; A07357; A07425; *see also* A03986-4007; A04045-46; A04065-74; A04097-141; A04206.

convincing evidence that its prior art SSS satisfied every limitation of those claims.

A patent claim is anticipated if a single prior art reference expressly or inherently discloses every limitation in the claim. *See, e.g., Orion IP, LLC v. Hyundai Motor Am.*, 605 F.3d 967, 975 (Fed. Cir. 2010). Anticipation is generally a question of fact, and a jury's findings on questions of fact are reviewed for substantial evidence. *See, e.g., Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1014 (Fed. Cir. 1998). "In reviewing factual issues for substantial evidence, the inquiry is whether a reasonable jury, given the record before it viewed as a whole, could have arrived at the conclusion it did." *Id.*

At trial, Digital River methodically walked through every limitation of the Asserted Patent Claims, presenting the following expert testimony and documentary evidence establishing that its prior art SSS disclosed each of those limitations:

Claim 13 of the '572 Patent	
An e-commerce outsourcing system comprising:	A04271-74; A04287-88; A04319-22; A06080; A06098; A06135.
a) a data store including a look and feel description associated with a host web page having a link correlated with a commerce object; and	
b) a computer processor coupled to the data store and in communication through the Internet with the host web page and programmed, upon receiving an indication that the link has been activated by a visitor computer in	A04058-60; A04288-93; A04322-28; A04360; A06123; A06155-62; A06165; A06320; A06503.

Internet communication with the host web page, to serve a composite web page to the visitor computer with a look and feel based on the look and feel description in the data store and with content based on the commerce object associated wit[h] the link.	
Claim 17 of the '572 Patent	
An e-commerce outsourcing process comprising the steps of:	A04293-95; A04328-30; A06135; A06356-501.
a) storing a look and feel description associated with a first website in a data store associated with a second website;	
b) including within a web page of the first website, which web page has a look and feel substantially corresponding to the stored look and feel description, a link correlating the web page with a commerce object; and	A04295-97; A04330-37; A06142-54; A06172; A06348; A06351-52; A06503.
c) upon receiving an activation of the link from a visitor computer to which the web page has been served, serving to the visitor computer from the second website a composite web page having a look and feel corresponding to the stored look and feel description of the first website and having content based on the commerce object associated with the link.	A04337-40; A06123; A06165; A06320.
Claim 20 of the '572 Patent	
The process of claim 17 wherein the <i>look and feel</i> description comprises data defining a set of navigational links, used on at least some of the web pages of the	A04112-15; A04340-42; A04345-47; A04360; A04585-89; A06171-72; A06889-90; A07498.

first website, each of which links to specific web pages of the first website.	
--	--

The above evidence easily proved by clear and convincing evidence that the Asserted Patent Claims are invalid as anticipated where Digital River's prior art SSS establishes that Digital River had knowledge of, invented, publicly or commercially used, and offered for sale and sold the claimed invention more than one year prior to DDR filing the provisional application for the '135 Patent (as to Claims 13 and 17) and more than one year prior to DDR filing the regular application for the '135 Patent (as to Claim 20). *See supra* at 5 n.4; *see also* A04045; A04099-102; A06637-57; A06818-83; A07162-69.

At trial, DDR attempted to distinguish the Asserted Patent Claims from Digital River's prior art SSS based primarily on the alleged differences between the "look and feel" stored and served by the claimed invention and the prior art SSS. For example, during DDR's case-in-chief, the co-inventors of the '572 Patent testified that the allegedly novel aspect of the claimed invention was its purported ability to better "match" the "look and feel" of a host website than the prior art in some unquantifiable manner. *See supra* at 7-8. When examining Digital River's witnesses and its own invalidity expert, DDR focused primarily on whether the webpages created by the prior art SSS "match[ed]" the "look and feel" of the host websites. *See* A04145-201; A04348-58; A04563-80. And during its closing

argument, DDR again focused primarily on how the prior art allegedly failed to “match” the “overall appearance” of the host website in the undefined way the claimed invention purportedly described. *See* A04693; A04701-02; A04756-68.

But, as shown above, the Asserted Patent Claims’ “look and feel” limitations are hopelessly subjective and vague, failing to notify one of ordinary skill in the art how to determine whether a host website’s “look and feel” and “overall appearance” have been achieved. *See supra* at 12-27. If the vagueness and subjectiveness of those terms do not render those claims invalid as indefinite (as they should), then they render the Asserted Patent Claims invalid as anticipated by virtually any prior art that replicates any degree of a host website’s “look and feel.” This includes Digital River’s prior art SSS. *See, e.g.*, A04219-20 (comparing “look and feel” elements shared by Digital Frontiers website (A07502) and store created by prior art SSS for same (A04023-24; A07494; A08856-57)); A03409-11, A04183 (comparing “look and feel” elements shared by Miramar Systems website (A06122) and store created by prior art SSS for same (A08858-61)).

More specifically, absent any objective test or standard for determining when “look and feel” and “overall appearance” have been achieved, those terms can be satisfied based on any number and combination of the “look and feel” elements listed in the district court’s construction of “look and feel.” Digital River, for example, presented evidence that the e-commerce outsource provider webpages

served by its prior art SSS satisfied the subjective “look and feel” limitations of the Asserted Patent Claims (assuming they are not indefinite) where such webpages shared as few as two or three of the listed “look and feel” elements with the host’s website. *See supra* at 31. Therefore, DDR’s attempts to distinguish Digital River’s prior art SSS from the claimed invention based solely on the mere absence of ***some*** of the other listed “look and feel” elements is not substantial evidence that the prior art SSS failed to satisfy the “look and feel” limitations of the Asserted Patent Claims ***as the district court actually construed those limitations***. *See, e.g., Constant v. Adv. Micro-Devices, Inc.*, 848 F.2d 1560, 1570-71 (Fed. Cir. 1988) (anticipation analysis focuses only on actual limitations in claims at issue).

Additionally, Digital River presented empirical evidence that its prior art SSS subjectively achieved the “look and feel” and “overall appearance” of its client’s websites based on the undisputed evidence of the prior art SSS’ commercial success. A03945-47. The commercial success of Digital River’s prior art SSS constitutes evidence that visitors to Digital River’s clients’ websites were finding that the prior art SSS achieved the “look and feel” and “overall appearance” of those websites based on the visitors’ decisions to purchase products promoted on those websites. Regardless of how one defines “look and feel” and “overall appearance” (assuming it is possible to objectively define such terms), the district court and DDR’s expert could not legitimately conclude that those terms

were not satisfied by Digital River's prior art SSS in light of Digital River's presentation of uncontroverted empirical evidence to the contrary.

In its opinion denying Digital River’s post-trial renewed motion for JMOL and motion for new trial on anticipation, the district court erroneously held that there was substantial evidence to support its ruling based on Digital River’s Vice President of Product and Innovation’s testimony “that earlier Digital River systems (1) had ‘much more limited functionality’ than the recent, infringing systems, (2) had ‘technical constraints’ that made it ‘difficult to emulate’ sites, (3) relied on ‘rigid predefinition of templates,’ (4) ‘only had a logo’ match, and (5) required a logo to appear at a fixed location absent a ‘hack’ to change location.” A00009-10. But the district court failed to tie such alleged evidence to any purported failure of the prior art SSS to satisfy one or more actual limitations in the Asserted Patent Claims so as to preclude a finding that such claims were invalid as anticipated.

The district court also cited testimony by DDR's expert witness in which he opined that "the SSS system and related publications failed to show any 'overall match' of appearance because the pair of websites Digital River presented 'basically had a matching logo,' which falls short of being 'based on' the host's 'look and feel.'" A00010. That would be competent evidence against anticipation only if one erroneously assumes that DDR's expert based his opinion on an objective test or standard (which, as shown above, does not exist) rather than his

purely subjective beliefs (which, as shown above, he conceded it was). Furthermore, as DDR's own expert agreed, neither the '572 Patent nor the district court's construction of "look and feel" requires proof that the websites be an "exact[]" or "perfect" match. A03719; A03725. Consequently, there is no principled basis under the claim language itself or the district court's claim construction for arguing that the replication of just two or three "look and feel" elements cannot establish "look and feel" and "overall appearance."

In sum, the testimony cited by the district court above, at best, merely shows that Digital River’s prior art SSS did not achieve “look and feel” *as easily or as well* as the claimed invention. But that is not any, much less substantial, evidence that the prior art SSS did not do it at all. Thus, the district court erroneously entered judgment that the Asserted Patent Claims are not invalid as anticipated.

IV. The District Court Erroneously Entered Judgment That the Asserted Patent Claims Are Not Invalid as Obvious

Alternatively, if the Asserted Patent Claims are not invalid as indefinite or anticipated, then the district court also erroneously entered judgment that the Asserted Patent Claims are not invalid as obvious. As shown below, the Asserted Patent Claims are invalid as obvious based on Digital River's prior art SSS alone.

Under 35 U.S.C. § 103, a patent may not issue “when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was

made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question whether a claim is obvious is a question of law based on underlying questions of fact. *See, e.g., Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The underlying factual considerations in an obviousness analysis include: (1) the scope and content of the prior art; (2) the differences between the prior art and claims at issue; (3) the level of ordinary skill in the art; and (4) any relevant secondary considerations. *Id.* at 17-18. Secondary considerations of nonobviousness include commercial success, long-felt but unsolved needs, industry skepticism, and copying, and prior art teachings. *See, e.g., id.* at 17; *Brown & Williamson Tobacco Corp. v. Phillip Morris Inc.*, 229 F.3d 1120, 1129 (Fed. Cir. 2000). A jury’s conclusion on obviousness – a question of law – is reviewed *de novo*, but the jury’s findings on the underlying facts are reviewed for substantial evidence. *See, e.g., Johns Hopkins Univ. v. Datascope Corp.*, 543 F.3d 1342, 1345 (Fed. Cir. 2008). “In reviewing factual issues for substantial evidence, the inquiry is whether a reasonable jury, given the record before it viewed as a whole, could have arrived at the conclusion it did.” *Dawn Equip. Co.*, 140 F.3d at 1014.

As shown above, Digital River presented clear and convincing evidence that Digital River's prior art SSS disclosed each and every limitation of the Asserted Patent Claims to the extent this Court concludes those claims are somehow capable

of meaningful construction. To avoid unnecessary duplication, such showing is expressly incorporated by reference herein. *See supra* at 27-34. Digital River further presented evidence that its prior art SSS rendered the Asserted Patent Claims obvious. A04264; A04343; *see also* A04360.

To the extent DDR claims that Digital River’s prior art SSS failed to achieve the “look and feel” limitations of the Asserted Patent Claims by failing to achieve *the degree* of “look and feel” that those claims allegedly require (*i.e.*, storing and serving more “look and feel” elements from the host website), that argument fails as a matter of law. As Digital River showed at trial, it would have been obvious to a person of ordinary skill in the art (or to anyone) to simply store and serve more “look and feel” elements until the “look and feel” or “overall appearance” of the website was subjectively conveyed. For example, Digital River presented evidence that its clients would not agree to link to its servers or to publish its webpages unless and until they were satisfied with the degree of “look and feel” stored and served by Digital River. *See, e.g.*, A04207-08; A04219-20. Thus, Digital River’s clients provided direct feedback and motivation for Digital River to enhance the “look and feel” it stored and served until it achieved the degree allegedly required by the Asserted Patent Claims. Additionally, while visitors to Digital River’s clients’ websites believed Digital River’s prior art SSS achieved the required “look and feel” based on that prior art’s commercial success, Digital River

would have been financially motivated to improve any alleged deficiencies in the “look and feel” that it stored and served where its business model at the time was to receive a percentage of every sale. *See, e.g.*, A04207-08.

DDR, in contrast, failed to present any evidence controverting this *prima facie* case of obviousness or establishing any secondary considerations of nonobviousness to rebut such a *prima facie* case. Furthermore, even though Digital River's post-trial motions clearly argued that all of the Asserted Patent Claims were invalid as obvious based on Digital River's prior art SSS alone (A04835-36), the district court failed to address that argument in its order denying Digital River's motion (A00010-11). The only obviousness theory that the district court specifically addressed was that Claim 20 was invalid as obvious based on Digital River's prior art SSS combined with the Arnold Patent (an alternative theory argued at trial). *Id.* And the district court's only basis for rejecting that obviousness theory was that Digital River failed to present evidence that there was a motivation to combine those prior art references. *Id.*

Digital River's obviousness theory based on Digital River's prior art SSS alone, however, does not require proof of a motivation to combine because it is a single prior art reference. Furthermore, even assuming Digital River failed to prove that its prior art SSS did not satisfy the sole additional limitation in dependent Claim 20 (which it did), Digital River nevertheless presented evidence

that it would have been obvious to a person of ordinary skill in the art to add the links required by that claim. A04343 (testimony by Digital River’s expert that creating the links required in Claim 20 “is a very, very easy thing to do”).

Based on Digital River's presentation of clear and convincing evidence that the Asserted Patent Claims are invalid as obvious in light of Digital River's prior art SSS alone and the district court's failure to identify any, much less a valid, ground for rejecting such theory, this Court should reverse the district court's judgment that the Asserted Patent Claims are not invalid as obvious and hold that Digital River is entitled to judgment as a matter of law on all of DDR's claims.

V. The District Court Erroneously Entered Judgment That Digital River Infringed the Asserted Patent Claims

A final independent ground for reversing the district court's judgment against Digital River is that the district court erroneously entered judgment that Digital River directly infringes the Asserted Patent Claims.¹⁰ The lynchpin of the

¹⁰ In addition to the district court's final judgment, this point of error encompasses a challenge to the following rulings that relate or may relate to the judgment of infringement against Digital River: (1) the district court's claim construction order to the extent the district court construed the Asserted Patent Claims to cover systems and processes involving two as well as three parties (A01053-79); (2) the district court's order denying Digital River's motion for summary judgment of noninfringement on the same ground (A02805-14); (3) the district court's overruling of Digital River's objections to the following jury instruction – "In addition to the claim definitions listed in your notebooks, the court has ruled, as part of the claim construction, that the '399 patent required three parties that are wholly separate entities, but the '572 patent does not have that same requirement. Instead, a party may infringe the '572 patent with a 'two-party'

district court's judgment was the district court's erroneous construction of those claims to cover systems and processes involving two parties – namely, (1) a party that serves the dual roles of host and merchant; and (2) a party that serves the role of e-commerce outsource provider. As shown below, the district court's construction of the Asserted Patent Claims constitutes reversible error where: (1) the intrinsic evidence conclusively establishes that such claims cover only systems and processes involving *three separate* parties (a host, e-commerce outsource provider, and merchant); and (2) there is no dispute Digital River's accused platforms involve only *two* parties.¹¹ Because there is no dispute that Digital River's accused platforms involve only two parties, Digital River is entitled to a judgment of non-infringement as a matter of law if this Court holds that the Asserted Patent Claims do not cover systems and processes involving two parties.

system where one party is the outsource provider and another party serves the dual roles of host and merchant” (A03056; A04626-27; A04636); and (4) the district court’s order denying Digital River’s post-trial renewed motion for JMOL under Rule 50(b) and motion for new trial under Rule 59 (A00004-35).

11 The district court and DDR have treated Digital River's two-party platforms as involving a party that sells its own products with the assistance of an e-commerce outsource provider (Digital River). A01209; A02813-14; A03056. While it agrees that its accused platforms involve only two parties, Digital River is, at best, the claimed "merchant" and its clients are the claimed "host" where Digital River is the reseller of record in the allegedly infringing transactions. A01062 (construing "merchant" to mean "[p]roducer, distributor, or reseller of goods or services to be sold"); A01422-24. Despite this disagreement, the district court's judgment of noninfringement must be reversed because the third party required by the Asserted Patent Claims is missing regardless of which characterization of Digital River's accused platforms is correct.

A. Overview of Governing Law on Infringement and Claim Construction

Determining whether an accused device infringes a patent involves a two-step analysis. *See, e.g., Markman v. Westview Instr., Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). The first step is determining the meaning and scope of the patent claims. *Id.* The second step is comparing the properly construed claims to the accused device. *Id.* Infringement occurs when every limitation recited in the claim is found in the accused device. *See, e.g., Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1467 (Fed. Cir. 1998) (*en banc*).

“It is a ‘bedrock principle’ of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). Because the patentee is required to “define precisely what his invention is,” it is “unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.” *Id.* (quoting *White v. Dunbar*, 119 U.S. 47, 52 (1886)). The claims, however, also must be reviewed in light of the patent’ specification and prosecution history. *Id.* at 1315-16. The claims further may be considered in light of extrinsic evidence, which consists of all evidence external to the patent and prosecution history and includes, *inter alia*, dictionaries. *Id.* at 1317.

The words of a claim are generally given their ordinary and customary meaning, which is “the meaning that the term would have to a person of ordinary

skill in the art in question at the time of the invention.” *Id.* at 1313. But “where the patentee has unequivocally disavowed a certain meaning to obtain his patent, the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim congruent with the scope of the surrender.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003); *see also id.* at 1325-26 (“[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable”). “As a basic principle of claim construction, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Id.* at 1324.

While the question whether an accused device infringes a patent claim is a question of fact, the construction of such claim is a question of law and is reviewed *de novo*. See, e.g., *Cybor Corp.*, 138 F.3d at 1454. For the purpose of reviewing the district court's overruling of Digital River's objection to the jury instruction above, such ruling also is a question of law and is reviewed *de novo*. See, e.g., *Commil USA, LLC v. Cisco Sys., Inc.*, 720 F.3d 1361, 1365 (Fed. Cir. 2013).

B. The Intrinsic Evidence Conclusively Establishes That the Asserted Patent Claims Cover Systems and Processes Involving Three Parties Only

The Asserted Patent Claims, the parties' agreed construction of those claims, and the specification conclusively establish that the Asserted Patent Claims only

cover systems and processes involving three separate parties – a host, merchant, and e-commerce outsource provider. No more, no less. Below are the parties' agreed constructions to the following key terms in the Asserted Patent Claims:

Term	Agreed Construction
Commerce object	A third-party merchant's: catalog, category, product (goods or services), or dynamic selection.
First website	Host website.
Host	An operator of a website that engages in Internet commerce by incorporating one or more links to an e-commerce outsource provider into its web content.
Merchant	Producer, distributor, or reseller of goods or services to be sold.
Outsource provider / E-commerce outsource provider	A party, independent from the host associated with the commerce object or merchant of the commerce object, that provides e-commerce support services between merchant(s) and host(s).

A01044; A01062-63.

Based on the Asserted Patent Claims’ express and unambiguous language as well as the parties’ agreed constructions of the terms above, the Asserted Patent Claims require that an allegedly infringing system or process involve *three* separate parties: (1) a “host”; (2) an “e-commerce outsource provider” (via the parties’ agreed construction of “host”); and (3) a “*third-party* merchant” (via the parties’ agreed construction of “commerce object”). The above constructions do not contemplate, much less permit, a two-party system or process involving an

entity that uses an e-commerce outsource provider to sell its own products. Substituting the parties' agreed construction of "commerce object" for the term "commerce object" in each of the Asserted Patent Claims clearly confirms that the host, merchant, and e-commerce outsource provider are three *separate* parties:

Claim 13 of the '572 Patent

An e-commerce outsourcing system comprising:

- a) a data store including a look and feel description associated with a **host web page having a link correlated with a [third-party merchant's product]**; and
- b) a computer processor coupled to the data store and in communication through the Internet with the host web page and programmed, upon receiving an indication that the link has been activated by a visitor computer in Internet communication with the host web page, to serve a composite web page to the visitor computer with a look and feel based on the look and feel description in the data store and with content based on the **[third-party merchant's product]** associated with the link.

* * *

Claim 17 of the '572 Patent

An e-commerce outsourcing process comprising the steps of:

- a) storing a look and feel description associated with a first website in a data store associated with a second website;
- b) **including within a web page of the first website**, which web page has a look and feel substantially corresponding to the stored look and feel description, **a link correlating the web page with a *[third-party merchant's product]***; and
- c) upon receiving an activation of the link from a visitor computer to which the web page has been served, serving to the visitor

computer from the second website a **composite web page having a look and feel corresponding to the stored look and feel description of the first website and having content based on the [third-party merchant's product]** associated with the link.¹²

A00162 (emphasis added).

If DDR had intended for a “commerce object” to encompass a product sold by the host, it could have demanded that “third-party” be dropped from the definition of “commerce object” so that “commerce object” referred to a “merchant’s product,” thereby permitting a “merchant” to be the same entity as the “host.” But it did not. The only reasonable purpose for including the qualifying term “third-party” in the agreed construction of “commerce object” is to make clear that the “merchant” must be a separate legal entity from the “host.”¹³

The district court further erred in construing “*third-party*” in the agreed construction of “commerce object” to cover systems and processes that involve only *two* parties. There is no evidence that a person of ordinary skill in the art at

¹² Claim 20 is a dependent claim from Claim 17. A00162. Thus, while Claim 20's additional limitation does not contain the term "commerce object," the remaining limitations of Claim 20 are identical to Claim 17. *Id.*

¹³ To the extent DDR argues that the purpose for including the qualifier “third-party” in the construction of “commerce object” was to establish that the “merchant” must be a separate entity from the “e-commerce outsource provider,” that argument fails because the parties’ agreed construction of “e-commerce outsource provider” already states that an “e-commerce outsource provider” must be “[a] party, independent from the host associated with the commerce object or merchant of the commerce object” A01063 (emphasis added).

the time of the invention would have understood “third-party” to mean anything different from that term’s plain and ordinary meaning, which is a third *separate* party to a transaction. *See, e.g.*, BLACK’S LAW DICTIONARY 1617 (9th ed. 2009) (defining “third party” to mean “someone other than the principal parties”); WEBSTER’S THIRD INTERNATIONAL DICTIONARY 2378 (1966) (defining “third party” to mean “a person other than the principals”). It ignores the plain and ordinary meaning of “third-party” as well as basic logic to allow a third party to be one of the two other parties to the transaction (*i.e.*, for 3 to mean 2).

Notably, DDR argued and the district court ruled that the term “third parties” as it is used in the ‘399 Patent (which is a continuation of and shares a common written description with the ‘572 Patent) should be construed to mean “separate legal entities under separate control.” A00122-61; A00163-204; A00543; A00619-20; A01043; A01055; A01079. Furthermore, during the prosecution of the ‘399 Patent, DDR proposed defining “third party” to mean “[a] party besides the two primarily concerned as in a law case or the like.” A01339-42. In light of DDR’s own arguments and the ruling above, this Court should reject the district court’s erroneous construction of “third-party” to mean *two* separate parties under the ‘572 Patent but *three* separate parties under the ‘399 Patent. Cf. *Omega Eng’g, Inc.*, 334 F.3d at 1334 (“[W]e presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning”).

Finally, the parties’ agreed construction of “e-commerce outsource provider” constitutes yet another independent ground for requiring the host and merchant to be separate parties based on the Asserted Patent Claims themselves. As noted above, the parties agreed to construe “e-commerce outsource provider” to mean “[a] party, independent from the host associated with the commerce object or merchant of the commerce object, that provides e-commerce support services *between merchant(s) and host(s).*” A01063 (emphasis added). It defies explanation how an e-commerce outsource provider can stand “*between* merchant(s) and host(s)” if the hosts and merchants are the same entity. While DDR has attempted to explain its way out of this non-sequitur by arguing that an e-commerce outsource provider can somehow stand between the same entity when that entity serves both a host “role” and merchant “role,” DDR’s explanation should be rejected out of hand because: (1) it improperly rewrites the Asserted Patent Claims to include the term/concept of a single party playing dual roles; and (2) irreconcilably conflicts with the parties’ agreed construction of “commerce object” to mean a “*third-party* merchant’s ... product.” A01062.

The district court, however, disregarded the parties’ agreed constructions of “commerce object” and “e-commerce outsource provider” above and held that the Asserted Patent Claims cover systems and processes involving two parties based on the following one-sentence sound bite from the 39-page specification:

There are three main parties in the outsourced e-commerce relationship, excluding the end consumer. These parties include Merchants, Hosts, and the e-commerce outsource provider. ***This folds into two parties where one party plays the dual role of Host and Merchant.***

A00159 (23:10-14) (emphasis added). The district court and DDR's reliance on this sentence is misplaced for at least the following reasons.

First, as shown above, the sentence conflicts with the district court's own construction of the Asserted Patent Claims to require three separate parties. While a patent's claims should be construed in light of the specification, this Court cannot expand the scope of the invention beyond the boundaries established by the patent's claims and the district court's construction of such claims:

TIP, of course, is correct that the specification of the ‘828 patent discloses an alternative embodiment However, to construe the claim term to encompass the alternative embodiment in this case would contradict the language of the claims. Indeed, read in the context of the specification, the claims of the patent need not encompass all disclosed embodiments. Our precedent is replete with examples of subject matter that is included in the specification but is not claimed. Therefore, the mere fact that there is an alternative embodiment disclosed in the ‘828 patent that is not encompassed by district court’s claim construction does not outweigh the language of the claim, especially when the court’s construction is supported by the intrinsic evidence.

TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1373 (Fed. Cir. 2008) (citations omitted); *Univ. of Rochester v. G.D. Searle & Co.*, 375 F.3d 1303, 1305 (Fed. Cir. 2004) (Lourie, J., concurring from denial of petition for rehearing *en banc*) (“It is well established that the specification teaches an invention whereas

¹⁴ See, e.g., A00140 & A00158 (Fig. 19; 4:19-20; 23:18-19; 23:46-48; 23:62-65) (in diagram of preferred embodiment in ‘572 Patent, identifying three separate entities serving as host (Culinary Café), merchant (Fancy Foods Gourmet Club), and e-commerce outsource provider (Nexchange)); A00159 (23:16-58) (discussing roles of “hosts” and “merchants” / e.g., 23:19-26: “The primary responsibilities of a Merchant are to ... [c]reate approval standards for passively recruited Host applicants based upon website profiles and target audience characteristics” / 23:48-52: “The responsibilities of a Host are to ... [u]se the outsource provider Host Manager service bureau to select the Merchants and products that will be offered from the Host’s website” / 23:48-58: “The responsibilities of a Host are to ... [r]egularly review the Merchant offerings for which they have been approved in order to take advantage of new products and to review sales and promotional strategies made available to them by the Merchant”); A00159 (23:10:13) (“There are three main parties in the outsourced e-commerce relationship, excluding the end consumer. These parties include Merchants, Hosts, and the e-commerce outsource provider”).

erroneous construction of the Asserted Patent Claims should be rejected because it conflicts not only with the patent's claim language but also its specification.

Third, even assuming the specification’s drive-by reference to systems and processes where the host and merchant are the same entity were sufficient to bring such systems and processes within the scope of the ‘572 Patent, DDR clearly and unmistakably disclaimed any such embodiment during the post-suit reexamination of the ‘572 Patent. *See, e.g., Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1304 (Fed. Cir. 2007) (“[B]y distinguishing the claimed invention over prior art, an applicant is indicating what the claims do not cover, he is by implication surrendering such protection”); *Springs Window Fashions, LP v. Novo Indus. L.P.*, 323 F.3d 989, 996 (Fed. Cir. 2003) (adopting claim construction excluding embodiment in view of prosecution history disclaimer); *Elekta Instr. S.A. v. O.U.R. Scientific Int’l*, 214 F.3d 1302, 1308 (Fed. Cir. 2000) (holding that preferred embodiment was disclaimed during prosecution of patent).

Specifically, during the post-suit reexamination of the ‘572 Patent, the Examiner invalidated the Asserted Patent Claims as anticipated by, *inter alia*, U.S. Patent No. 6,016,504 (“the Arnold Patent”). A01345; A01351-57. In an attempt to salvage its claims and, thus, the present lawsuit, DDR repeatedly and unequivocally argued to the Examiner and BPAI that the Arnold Patent – which disclosed a two-party system – was not invalidating prior art because the Asserted

Patent Claims required *three*-party systems. For example, DDR stated:

- ***“The IBM art is distinct from all claims, however, because the two websites are not owned by independent entities – i.e., both are IBM sites. The IBM art have even fewer of the necessary parties than the art applied and discussed above in this response. The IBM art has one party, namely IBM, and lacks the necessary combination of host, merchants, and outsource provider.”***

A00939 (emphasis added).

- ***“Judge Turner: . . . [W]hy does there need to be a third-party in Claim 17? Couldn’t that claim be performed with two parties?”***

[Counsel for DDR]: Because the same claim term – the only way you – if you assume the claim 25 and 26 require delivery to a third-party, then the same claim term, ‘commerce object,’ is used in the – in claim – in the independent claim, as well, and, therefore, it has to be interpreted consistently.

So it is not as though it said wherein it is a third-party or wherein there is only – there is an extra party and we are giving that extra party the information. That would actually tend to make it clear the other direction, that the Examiner’s interpretation were correct. It didn’t say that.

What it does is – there is no additional language in 25 that says it. ***It just uses the same term, ‘commerce object,’ and from which, you know, it is clear that the merchant is a third-party.”***

A06986-87 (emphasis added).

- ***“A. Arnold Has the Wrong Number of Parties***

The Arnold patent lacks one of the three parties of the subject patent.”

A01370-71 (emphasis added).

- “The fact that Arnold *has the wrong number of parties is highly significant.*”

A01372 (emphasis added).

- “... Arnold’s link from the host website to the merchant directly does not correlate/respond with a (selected) commerce object (as the language of claims 1, 13, and 17 variously require), because the term ‘commerce object’ in the patent in question, is defined as a product of a *third-party merchant*, not a product sold by the owner of the linked page.”

A06941-42 (emphasis added).

- “I think it is clear that if you read through the specification in its clarity – I mean in its entirety and including the parts I cited in the Bbrief [sic], you will see that the sense of the – you will see that through the specification, in using the term “commerce object” is referring to a commerce object of a *third-party merchant* and that’s the way the specification is written.

It is the – *the whole concept of the entirety of the lengthy specification* is dealing with this notion of an *outsource provider intervening between, as an intermediary party, between a host and a merchant.*”

A06988-89 (emphasis added).

- (7) “The distinctions are crucial, in the context of the patent being reexamined, because the patent states, ‘There are *three main parties* in the outsourced e-commerce relationship, excluding the end consumer. These parties include Merchants, Hosts, and the e-commerce outsource provider.’ [Col. 23, L. 10-13].”

A01390 (emphasis added).

The PTO ultimately confirmed the validity of the ‘572 Patent based on DDR’s arguments that the Arnold Patent did not disclose the *three* parties that the patent required. A01410-12; A05807-08. Based on the evidence above, DDR disclaimed two-party systems and processes as falling within the scope of the Asserted Patent Claims. *See, e.g., Ekchian*, 104 F.3d at 1304; *Springs Window Fashions, LP*, 323 F.3d at 996; *Elekta Instr. S.A.*; 214 F.3d at 1308.

In its order denying Digital River’s motion for summary judgment of non-infringement,¹⁵ the district court ruled DDR did not disclaim two-party systems in which the host and merchant are the same entity. A02812-13. According to the district court, DDR’s re-examination statements that the ‘572 Patent only covers three-party systems and processes are completely immaterial in this case because DDR was merely referring to the need for an e-commerce outsource provider separate from the host and merchant (which the Arnold Patent did not teach). *Id.*

However, virtually (if not) all of DDR's re-examination statements quoted above cannot reasonably be read to merely assert that there must be an e-commerce outsource provider separate from the host and merchant. DDR certainly knew how to make such a narrow argument, yet it did not do so and for good reason. At the

15 In its order denying Digital River's post-trial renewed motion for JMOL based on the infringement argument above, the district court indicated that it was rejecting such argument for the same reasons previously set forth in its order denying Digital River's motion for summary judgment. A00011-13.

time DDR made the above statements, its lawsuit against Digital River and the other defendants was in mortal jeopardy. The Examiner had invalidated the patents upon which DDR had sued those defendants. The safer course in the BPAI was not to hope that the BPAI would appreciate the nuances of an argument that the ‘572 Patent covered certain two-party systems and processes (a party selling goods and an e-commerce outsource provider – *e.g.*, Digital River’s accused platforms) but not others (a host and a merchant – *e.g.*, the prior art Arnold Patent). Instead, the safer course was to more broadly argue that the ‘572 Patent applied to three-party systems and processes only – *i.e.*, to disclaim that the ‘572 Patent applied to **any** two-party systems and processes – in order to minimize the risk of invalidation posed by two-party prior art like the Arnold Patent.

DDR cannot now have its cake and eat it, too, by walking back the statements it made during the reexamination in order to save its infringement claims against Digital River. While the district court correctly observed that DDR's statements during the reexamination must be considered in the context in which they were made, the district court incorrectly concluded that the context helped rather than hurt DDR on the prosecution disclaimer issue. The bottom line is that if a party such as Digital River were to review the reexamination materials to determine whether the '572 Patent covers systems and processes involving two parties, the only reasonable conclusion it would draw based on DDR's clear and

unmistakable statements quoted above is that DDR had disclaimed *any* alleged embodiment of the claimed invention involving two parties only.

Finally, Digital River asks this Court to reject the district court’s ruling that it is possible for Digital River to serve as an “intermediary” intervening between a host and merchant that are the same entity because, “practically speaking, such an arrangement could occur whenever an entity sells products on a website that it also hosts.” A02813. DDR’s deliberate decision to use the word “intermediary” is important and cannot be summarily dismissed by the district court. The critical inquiry on infringement is whether the Asserted Patent Claims cover systems and processes involving two as well as three parties. The ordinary and customary meaning of “intermediary” is one who acts between two parties – not between one party serving two “roles.” *See, e.g.*, BLACK’S LAW DICTIONARY 890 (9th ed. 2009) (“A mediator or go-between; a **third-party** negotiator ...”) (emphasis added); WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1180 (1966) (“... [A]cting or capable of acting **between others** as a mediator”) (emphasis added).

C. There Is No Dispute That Digital River's Accused Platforms Involve Only Two Parties and, Thus, Do Not Infringe the Asserted Patent Claims

Infringement generally is a question of fact, but, in this case, there is no dispute that all of Digital River’s accused platforms and stores involve only *two* parties. *See supra* at 39 n.11. Thus, if this Court, as it should, holds that the

Asserted Patent Claims ***do not*** cover systems and processes involving two parties, then Digital River is entitled to reversal of the district court's judgment of infringement and rendition of a judgment of noninfringement as a matter of law.

CONCLUSION

For the foregoing reasons, Appellant Digital River, Inc. respectfully requests that this Court: (1) reverse the district court's judgment of direct infringement and award of damages, prejudgment and postjudgment interest, and costs against Digital River and hold that Digital River is entitled to judgment as a matter of law on all of DDR's claims; (2) reverse the district court's judgment that Claims 13, 17, and 20 of the '572 Patent are not invalid and hold that the claims are invalid as indefinite, anticipated, and/or obvious; (3) award Digital River its costs on appeal; and (4) grant Digital River any and all other relief to which it is entitled.

Respectfully submitted,

By /s/ Warren S. Huang
Warren S. Huang
Principal Counsel
FULBRIGHT & JAWORSKI LLP
1301 McKinney, Suite 5100
Houston, Texas 77010-3095
Telephone: (713) 651-5151
Facsimile: (713) 651-5246
warren.huang@nortonrosefulbright.com

Brett C. Govett
Of Counsel
FULBRIGHT & JAWORSKI LLP
2200 Ross Avenue, Suite 2800
Dallas, Texas 75201
Telephone: (214) 855-8000
Facsimile: (214) 855-8200
brett.govett@nortonrosefulbright.com

Jonathan S. Franklin
Of Counsel
FULBRIGHT & JAWORSKI LLP
801 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Telephone: (202) 662-0200
Facsimile: (202) 662-4643
jonathan.franklin@nortonrosefulbright.com

*Counsel for Defendant-Appellant
Digital River, Inc.*

CERTIFICATE OF SERVICE

Undersigned counsel hereby certifies that a copy of Opening Brief for Appellant Digital River, Inc. was served by electronic filing and e-mail on October 9, 2013, upon:

Mr. Louis J. Hoffman
HOFFMAN PATENT FIRM
14301 North 87th Street, Suite 312
Scottsdale, Arizona 85260
(Counsel for Appellee)
DDR-service@valuablepatents.com

Mr. Norman H. Zivin
COOPER DUNHAM LLP
30 Rockefeller Plaza
New York, New York 10112
(Counsel for Appellants NLG/WITH)
nzivin@cooperdunham.com

Mr. Ian B. Crosby
SUSMAN GODFREY L.L.P.
1201 Third Avenue, Suite 3800
Seattle, Washington 98101-3000
(Counsel for Appellee)
DDR-service@valuablepatents.com

/s/ Warren S. Huang
Warren S. Huang

CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B), because it contains 13,916 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the typestyle requirements of Federal Rule of Appellate Procedure 32(a)(6), because it has been prepared in a proportionally-spaced typeface using Microsoft Word 2010 in Times New Roman 14-point font.

/s/ Warren S. Huang

Warren S. Huang
Counsel for Appellant
October 9, 2013

66497843

INDEX TO ADDENDUM

1. Final Judgment
2. Memorandum Opinion and Order Denying Post-Trial Motions
3. U.S. Patent No. 6,993,572

Addendum 1

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

DDR HOLDINGS, LLC

Plaintiff and Counterdefendant,

v.

HOTELS.COM, L.P., et al.

Defendants and Counterclaimants.

§
§
§
§
§
§
§
§
§

CIVIL ACTION NO. 2:06-cv-42-JRG

JUDGMENT

A jury trial commenced on October 8, 2012. The jury returned a unanimous verdict on October 12, 2012. Pursuant to Rule 58 of the Federal Rules of Civil Procedure and in accordance with the jury's verdict, the Court hereby renders the following Judgment:

1. The jury having determined that Defendant Digital River, Inc. ("Digital River") infringed claims 13, 17, and 20 of U.S. Patent No. 6,993,572 ("the '572 Patent"); and the jury having determined that those same claims of the '572 Patent are not invalid; and the jury having awarded damages of \$750,000.00 to DDR for Digital River's infringement through October 12, 2012; it is **ORDERED** that DDR have and recover from Digital River the sum of Seven Hundred and Fifty Thousand Dollars (\$750,000.00) as compensatory damages for infringement through October 12, 2012 in this case;
2. The jury having determined that Defendants National Leisure Group, Inc. and World Travel Holdings, Inc. ("NLG/WTH") infringed Claims 13, 17, and 20 of the '572 Patent and Claims 1, 3, and 19 of U.S. Patent No. 7,818,399 ("The '399 Patent"); and the jury having determined that those same claims of the '572 Patent are not invalid; and

the jury having awarded damages of \$750,000.00 to DDR for NLG/WTH's infringement through October 12, 2012; it is **ORDERED** that DDR have and recover from NLG/WTH the sum of Seven Hundred and Fifty Thousand Dollars (\$750,000.00) as compensatory damages for infringement through October 12, 2012 in this case;

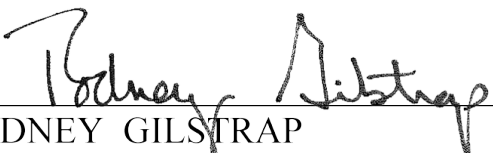
3. Pursuant to 35 U.S.C. § 284, the Court awards DDR an additional Two Hundred Eighty-One Thousand, Four Hundred and Four Dollars (\$281,404.00) in pre-judgment interest from Digital River, based upon the average prime interest rate of 4.83% as calculated and applying from the date the damages for infringement should have been paid, January 31, 2006, through October 31, 2012, compounded annually. Accordingly, the total damages awarded to DDR from Digital River is One Million, Thirty-One Thousand, Four Hundred and Four Dollars (\$1,031,404.00), plus an additional amount at the per diem rate of One Hundred Thirty-One Dollars and Seventy-One Cents (\$131.71) per day beginning on November 1, 2012, through the entry of this Judgment.
4. Pursuant to 35 U.S.C. § 284, the Court awards DDR an additional Two Hundred Eighty-One Thousand, Four Hundred and Four Dollars (\$281,404.00) in pre-judgment interest from NLG/WTH, based upon the average prime interest rate of 4.83% as calculated and applying from the date the damages for infringement should have been paid, January 31, 2006 through October 31, 2012, compounded annually. Accordingly, the total damages awarded to DDR from NLG/WTH is One Million, Thirty-One Thousand, Four Hundred and Four Dollars (\$1,031,404.00), plus an additional amount at the per diem rate of One Hundred Thirty-One Dollars and

Seventy-One Cents (\$131.71) per day beginning on November 1, 2012, through the entry of this Judgment.

5. Pursuant to Rule 54(d) of the Federal Rules of Civil Procedure and 28 U.S.C. § 1920, the Court finds that DDR is the prevailing party in this matter and is entitled to costs consistent therewith.
6. Pursuant to 28 U.S.C. § 1961, the Court awards DDR post-judgment interest applicable to all sums awarded herein, at the statutory rate, from the entry of this Judgment until paid.

So Ordered and Signed on this

Jun 20, 2013



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE

Addendum 2

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

DDR HOLDINGS, LLC

Plaintiff and Counterdefendant,

v.

HOTELS.COM, L.P., et al.

Defendants and Counterclaimants.

§
§
§
§
§
§
§
§
§

CIVIL ACTION NO. 2:06-cv-42-JRG

MEMORANDUM OPINION AND ORDER

Before the Court are the parties’ post-trial motions. Having considered the parties’ written submissions, the Court: (1) **DENIES** Defendant Digital River, Inc.’s Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) (Dkt. No. 540); (2) **DENIES** National Leisure Group, Inc.’s and World Travel Holdings, Inc.’s Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) (Dkt. No. 539); and (3) **DENIES** Defendant Digital River, Inc.’s Motion for New Trial Pursuant to Fed. R. Civ. P. 59 (Dkt. No. 562).

I. BACKGROUND

DDR Holdings, LLC (“DDR”) filed this patent infringement action against multiple defendants on January 31, 2006, alleging infringement of U.S. Patent Nos. 6,629,135 (“the ’135 patent”) and 6,993,572 (“the ’572 patent”). The case was then stayed for almost four years until October 6, 2010, pending the reexamination proceedings at to both of the patents-in-suit. On September 9, 2011, DDR amended its complaint to add additional infringement allegations of U.S. Patent No. 7,818,399 (“the ’399 patent”). This case went to trial on October 8, 2012 against Digital River, Inc. (“Digital River”), National Leisure Group, Inc., and world Travel Holdings, Inc. (collectively, “NLG”). Following a five day trial, the jury returned a unanimous verdict finding

that Digital River infringed claims 13, 17, and 20 of the '572 patent and awarded damages to DDR of \$750,000 for the period of the issue date of the patent, January 31, 2006, through the verdict date, October 12, 2012. The jury also found that NLG infringed claims 13, 17, and 20 of the '572 patent and claims 1, 3, and 9 of the '399 patent and awarded damages to DDR of \$750,000 for the period of the earliest issue date, January 31, 2006, through the verdict date. The jury did not find either infringement to be willful. The jury further found that claims 13, 17, and 20 of the '572 patent was not invalid.

II. APPLICABLE LAW REGARDING RULE 50

Judgment as a matter of law is only appropriate when “a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” Fed. R. Civ. P. 50(a). “The grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law, reviewed under the law of the regional circuit in which the appeal from the district court would usually lie.” *Finisar Corp. v. DirectTV Group, Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). The Fifth Circuit “uses the same standard to review the verdict that the district court used in first passing on the motion.” *Hiltgen v. Sumrall*, 47 F.3d 695, 699 (5th Cir. 1995). Thus, a jury verdict must be upheld, and judgment as a matter of law may not be granted, unless “there is no legally sufficient evidentiary basis for a reasonable jury to find as the jury did.” *Id.* at 700. The jury’s verdict must be supported by “substantial evidence” in support of each element of the claims. *Am. Home Assurance Co. v. United Space Alliance*, 378 F.3d 482, 487 (5th Cir. 2004).

A court reviews all evidence in the record and must draw all reasonable inferences in favor of the nonmoving party; however, a court may not make credibility determinations or weigh the evidence, as those are solely functions of the jury. *See Reeves v. Sanderson Plumbing Prods., Inc.*,

530 U.S. 133, 150-51 (2000). The moving party is entitled to judgment as a matter of law “only if the evidence points so strongly and so overwhelmingly in favor of the nonmoving party that no reasonable juror could return a contrary verdict.” *Int’l Ins. Co. v. RSR Corp.*, 426 F.3d 281, 296 (5th Cir. 2005).

III. APPLICABLE LAW REGARDING RULE 59

Under Rule 59(a) of the Federal Rules of Civil Procedure, a new trial can be granted to any party to a jury trial on any or all issues “for any reason for which a new trial has heretofore been granted in an action at law in federal court.” Fed. R. Civ. P. 59(a). “A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course.” *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612-13 (5th Cir. 1985). The Court must view the evidence “in a light most favorable to the jury’s verdict, and [] the verdict must be affirmed unless the evidence points so strongly and overwhelmingly in favor of one party that the court believes that reasonable persons could not arrive at a contrary conclusion.” *Dawson v. Wal-Mart Stores, Inc.*, 978 F.2d 205, 208 (5th Cir. 1992).

IV. DIGITAL RIVER’S RENEWED MOTION FOR JUDGMENT AS A MATTER OF LAW PURSUANT TO FED. R. CIV. P. 50(B) (DKT. NO. 540)

Digital River seeks judgment as a matter of law pursuant to Fed. R. Civ. P. 50(b) that (1) the asserted claims are invalid under 35 U.S.C. § 112 as indefinite; (2) the asserted claims are invalid under 35 U.S.C. §§ 102 and 103 as anticipated and/or obvious; (3) the asserted claims are invalid under 35 U.S.C. § 101 as directed to subject matter that is not eligible for patent protection; (4) Digital River does not directly infringe the asserted claims; and (5) DDR did not prove that it is entitled to any damages.

A. The asserted claims are not invalid under 35 U.S.C. § 112 as indefinite

Digital River contends that it is entitled to judgment as a matter of law that the asserted claims are invalid as indefinite because the patent specification lacks the required objective guidance to allow one of ordinary skill in the art to know when the claimed “look and feel” element has been achieved. (Dkt. No. 540, at 2.) As support, Digital River relies on *Datamize, LLC v. Plumtree Software, Inc.* where the Federal Circuit found the term “aesthetically pleasing” to be indefinite because the patentee “offered no objective definition identifying a standard for determining when an interface screen is aesthetically pleasing.” 417 F.3d 1342, 1350 (Fed. Cir. 2005). However, this Court does not find “aesthetically pleasing” to be analogous to the concept of “look and feel” in this case.

35 U.S.C. § 112 ¶ 2 requires claims to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. The purpose of the definiteness requirement is to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee’s right to exclude. *Honeywell Int’l Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1338 (Fed. Cir. 2003). A claim is indefinite when it depends “solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention.” *Datamize*, 417 F.3d at 1350. However, “[i]f the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). Whether a patent claim fails for indefiniteness is a question of law for the Court to decide. *Id.* at 1376.

This Court previously defined “look and feel” to be “a set of elements related to visual appearance and user interface conveying an overall appearance identifying a website; such elements include logos, colors, page layout, navigation systems, frames ‘mouse-over’ effects, or others [*sic*] elements consistent through some or all of the website.” (Dkt. No. 309 at 10.) The claims define the question of whether the “look and feel” of the web pages that Digital River serves are “based on” the look and feel of the referring host site. A comparison of visual elements according to the Court’s construction between a pair of websites is precisely the type of infringement question for the trier of fact to decide. Such a comparison does not render the jury’s decision subjective. Indeed, claims need not have mathematically precise boundaries so long as the patent gives examples and general guidelines. *See Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1335 (Fed. Cir. 2010) (the term “not interfering substantially” does not render claims indefinite); *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001) (terms like “about” and “substantially” are descriptive terms commonly used in patent claims to “avoid a strict numerical boundary to the specified parameter.”).

A finding of indefiniteness must overcome the statutory presumption of validity. *See* 35 U.S.C. § 282. That is, the “standard [for finding indefiniteness] is met where an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008). The Court does not find that Digital River has met its burden. Accordingly, judgment as a matter of law as to a finding of indefiniteness is denied.

B. The asserted claims are not invalid as anticipated and/or obvious

Digital River contends it has shown by clear and convincing evidence, through the testimony of Mr. Pichler and Mr. Kent, that the asserted claims are invalid. Digital River argues that the claims are invalid as anticipated by the Digital River Secure Sales System (“SSS System”), and also invalid as obvious in light of the SSS System, and/or in light of the combination of the SSS System with U.S. Patent No. 6,141,666 (the “Tobin patent”). Digital River argues that since three of the exemplary “look and feel elements” from the Court’s claim construction were included in its prior art system, substantial evidence contradicts the jury’s conclusion that the “look and feel” limitation is not met. (Dkt. No. 557 at 5.) The Court disagrees.

As stated earlier, the Court construed “look and feel” to mean

“[a] set of elements related to visual appearance and user interface conveying an overall appearance identifying a website; such elements include logos, colors, page layout, navigation systems, frames, ‘mouse-over’ effects, or others [*sic*] elements consistent through some or all of the website.”

(Dkt. No. 309 at 10.) While Digital River is correct that the list of elements in the Court’s construction is exemplary and not exclusive, this term is not necessarily satisfied by matching one, three, or a specific number of the exemplary elements. Rather, it is up to the trier of fact to determine whether the combination of elements making up the overall appearance of a website has a similar “look and feel” as compared to another website.

Indeed, the trial record reveals that the jury heard from Digital River’s witnesses about how the SSS System operated and what capabilities it had, and the jury has weighed the credibility of such evidence. The trial record shows that Digital River’s Vice President of Product and Innovation, Mr. Gagliardi, testified that earlier Digital River systems (1) had “much more limited functionality” than the recent, infringing systems, (2) had “technical constraints” that made it

“difficult to emulate” sites, (3) relied on “rigid predefinition of templates,” (4) “only had a logo” match, and (5) required a logo to appear at a fixed location absent a “hack” to change location. (10/8/2012 PM Tr. at 221:10-224:15; 10/10/12 PM Tr. at 161:11-165:2.) DDR’s expert witness, Dr. Keller, also offered his opinion that the SSS System and related publications failed to show any “overall match” of appearance because the pair of websites Digital River presented “basically had a matching logo,” which falls short of being “based on” the host’s “look and feel.” (10/11/2012 PM Tr. at 103:2-112:19.) The jury considered such evidence, including the pairs of websites that Digital River displayed, and evidently found no corresponding overall look and feel to render the ’572 patent invalid in light of the SSS system.

Turning to the issue of obviousness, there is substantial evidence in the record that that claim 20 of the ’572 patent is not obvious in view of the SSS System and/or in light of the combination of the SSS System and the Tobin patent. DDR’s expert provided the following testimony that the jury was entitled to consider in rendering their verdict:

Q. And when we’re talking about obviousness, is it sufficient to put a reference in front of each of the elements, or do you have to show something more?

A. You have to show something more.

Q. What is that something more?

A. It’s called a motivation to combine, to combine those references, to put them together.

Q. Okay. Dr. Keller, you looked at Mr. Kent’s report with respect to this combination, didn’t you?

A. Yes, I did.

Q. Did he say -- in the report, did he say why someone would be motivated to combine these two references?

A. No, he did not.

Q. And in his testimony before the jury today, did he give -- did he tell the jury what the motivation was to combine the two references?

A. No, he did not.

(10/11/2012 PM Tr. at 121:9-122:8.) In other words, Digital River did not meet their burden to show obviousness by clear and convincing evidence. For these reasons, the Court finds that substantial evidence supports the jury's verdict that the asserted claims are not invalid as anticipated or obvious in light of the SSS System and/or in light of the combination of the SSS System and the Tobin patent.

C. Judgment as a matter of law of invalidity for failing to claim patent-eligible subject matter

Digital River contends that the asserted claims are invalid as unpatentable subject matter under 35 U.S.C. § 101 because they are directed to an abstract idea. (Dkt. No. 540 at 13.) In its opposition, DDR incorporates by reference its opposition to a similar argument made by defendant NLG. (Dkt. No. 552 at 7.) In reply, Digital River also incorporates by reference its responsive arguments in NLG's reply to DDR's Opposition. (Dkt. No. 557 at 6.) To similarly avoid repetition, the Court addresses this common issue in Section V(B), below.

D. Judgment as a matter of law of no infringement of the asserted claims

Digital River contends that it is entitled to judgment as a matter of law of no infringement because no reasonable jury could find that Digital River directly infringed based on three grounds: (1) the asserted claims require three separate entities, (2) DDR failed to perform the required element-by-element infringement analysis, and (3) substantial evidence does not support the jury's direct infringement verdict because Digital River does not store the "look and feel," as required by the asserted claims. (Dkt. No. 540 at 15-16.)

i. The '572 patent covers two-party systems

Digital River seeks a judgment of no infringement as a matter of law based on the same arguments presented in its motion for summary judgment, which was previously denied by the

Court. (*See* Dkt. No. 500.) Digital River argues error in the Court's conclusion that the asserted claims can encompass two-party systems because it was based on a single statement in the specification. Digital River urges that "by allowing that one statement to override the remainder of the prosecution history, the Court committed legal error because even a statement in a patent can be disclaimed." (Dkt. No. 558 at 7.) Digital River asserts that during prosecution, DDR clearly and unmistakably disclaimed two-party systems by distinguishing its invention from certain prior art two-party systems. (*Id.* at 8.) In its opposition, DDR responds that Digital River merely repeats its previously rejected arguments without specifying why there is some mistake within the Court's prior ruling.

On review, the Court does not find error with its previous ruling. Contrary to Digital River's assertion that the Court allowed one statement in the specification to override the entire prosecution history, the Court specifically considered each prosecution history disclaimer argument that Digital River presented. In the Memorandum and Opinion denying Digital River's Motion For Summary Judgment (after considering the parties' written submissions, hearing oral argument, and a thorough review of the full reexamination file of the '572 patent), the Court held there was no clear disavowal of claim scope. (Dkt. No. 500 at 9.) The Court underscored the importance of context in considering the isolated statements cited by Digital River, and specifically found that "[w]hen viewed as a whole, the reexamination file shows that there is no clear and unambiguous disavowal of claim scope that would preclude the two-party embodiment expressly disclosed in the specification." (*Id.* at 8-9.) The Court does not reach a different conclusion when presented with the same (but simply rehashed) arguments post-trial.

For the foregoing reasons, the Court does not find legal error with its prior summary judgment ruling. Accordingly, the Court reaffirms that, as a matter of law, a party may infringe the '572 patent with a two-party system.

ii. Substantial evidence supports finding of direct infringement of AutoDesk, Adobe and VMware

Digital River contends that it is entitled to judgment as a matter of law of no infringement because DDR's infringement expert, Dr. Keller, did not compare each element of the asserted claims with each of the accused systems. Digital River argues that Dr. Keller failed to demonstrate at trial that the AutoDesk, Adobe and VMware websites encompass each element of each asserted claim. (Dkt. No. 540 at 23.)

In its opposition, DDR responds that the jury heard substantial evidence of direct infringement of the overall visual appearance elements of the asserted claims. For example, the jury observed images of the three customers' websites and a list of "visual similarities" between the website pairs, in addition to Dr. Keller's testimony that the hosted sites infringed. (Dkt. No. 552, at 8.) DDR also responds that the jury heard substantial evidence of direct infringement by AutoDesk, Adobe and VMware as to all of the other elements of the asserted claims. DDR submits that during trial, Dr. Keller testified that Digital River accomplished six different infringements (including the three challenged ones) on the same platform called the "Global Commerce System." (*Id.* at 9.) DDR also submits that Dr. Keller testified that the "Global Commerce System" directly infringes the '572 patent by using one of the six infringements as an example for purposes of stepping through the remaining claim elements. (*Id.*) Therefore, DDR argues that this testimony also applies to the other five infringements that use this platform. The Court agrees.

The trial record reflects that DDR presented substantial evidence to support a jury verdict that the AutoDesk, Adobe and VMware websites met each element of the asserted claims. Dr. Keller testified that Digital River accomplished six different infringements via six customers, including the three challenged ones, on the same platform known as the “Global Commerce System.” (10/9/2012 AM Tr. at 82:18-86:22.) Dr. Keller walked through, on an element-by-element basis, how the “Global Commerce System” infringed claims 13, 17, and 20 of the ’572 patent as to Trend Micro, one of the six Digital River customers. (*Id.* at 88:9-98:15 and 125:24-139:5.) Then, Dr. Keller discussed infringement of the Nuance store, another one of the six Digital River customers, and explained the differences between Global Commerce’s operation of the Nuance Store from the Trend Micro store:

Q. Does Digital River’s operation of Global Commerce to provide the Nuance store differ in any way from the -- its operation of the Trend Micro store on the Global Commerce Platform?

A. Just a few ways.

First of all, we’re displaying -- Digital River is displaying Nuance’s products rather than Trend Micro’s products, and it’s using the look and feel of Nuance’s website as opposed to Digital River’s -- sorry -- as opposed to Trend Micro’s website.

Q. So outside of the differences with respect to the particular look-and-feel match and the particular commerce content, did you identify any other differences between the operation of the Global Commerce platform for Nuance site and for Trend Micro site?

A. No.

(10/9/2012 AM Tr. at 139:7-22.) Dr. Keller continued in his testimony by comparing the look and feel of each website pair and listing visual similarities between them for the Nuance store (*Id.* at 139:22-145:3), Microsoft store (*Id.* at 145:6-148:8), AutoDesk (*Id.* at 148:10-149:19), Adobe (*Id.* at 149:20-151:5), and VMware (*Id.* at 151:13-153:7.)

The Court finds that Dr. Keller’s testimony of how the Global Commerce platform running the Trend Micro store infringes the asserted claims, taken as a whole with the visual comparison of

each of the six customer websites, supports a jury finding that each customer website running on the Global Commerce platform infringes in a similar manner. In addition, the exhibits of product pages for each customer's host website and Dr. Keller's comparison to the each customer's outsourced store page served by Digital River's Global Commerce platform constitutes substantial evidence to support the jury's verdict of direct infringement by AutoDesk, Adobe and VMware.¹

iii. *Substantial evidence supports a finding that Digital River directs and/or controls Akamai servers*

Digital River contends there is no substantial evidence in the record that it stores the "look and feel" information as required by the asserted claims because the servers are neither owned nor operated by Digital River. (Dkt. No. 540 at 24.) Digital River asserts that trial testimony showed that it entered into an arms-length contract with Akamai to provide the servers, and such arms-length cooperation is insufficient to support a finding of direct infringement. (*Id.* at 25.)

In response, DDR first argues that Digital River waived this defense by failing to disclose it in advance of trial, pursuant to Fed. R. Civ. P. 37(c)(1), which states: "If a party fails to provide information . . . as required by Rule 26(a) or (e) . . . , the party is not allowed to use that information . . . to supply evidence on a motion, at a hearing, or at trial, unless the failure was substantially justified or is harmless." However, Rule 26(a)(3)(A) provides that "a party must provide . . . the evidence it may present at trial *other than solely for impeachment*" (emphasis added). Digital River replies that its attack on DDR's infringement case is based on Dr. Keller's revelation during cross-examination that he did not investigate the location or owner of the servers that he alleged were involved in infringement, and is thus not waived. (10/9/2012 PM Tr. at 55:21-57:7.) As DDR

¹ The Court notes that Digital River does not contend judgment as a matter of law of no direct infringement for its other customer websites (e.g. the Microsoft store), even though Dr. Keller did not specifically walk through the Global Commerce platform as to its operation of each website.

has provided no case law compelling the Court to find waiver in such a situation where the rules do not preclude impeachment evidence, the Court does not find waiver occurred.

DDR next argues that notwithstanding its allegations of waiver, there is substantial evidence to support the jury's verdict of infringement. DDR contends that the jury is entitled to make the reasonable inference that (1) Akamai is Digital River's agent, (2) Akamai serves a duplicated image of Digital River data, and (3) Digital River directs and controls Akamai's activities. (Dkt. No. 552 at 11.) To "use" a system for purposes of infringement, "a party must put the invention into service, i.e., control the system as a whole and obtain benefit from it" *Centillion Data Sys., LLC v. Qwest Commc'ns Int'l, Inc.*, 631 F.3d 1279, 1284 (Fed. Cir. 2011). The "control" contemplated does not have to be physical or direct control; rather, it is the ability to place the system as a whole into service. *Id.* During trial, the jury heard testimony from Mr. Gagliardi that Digital River had a contract with Akamai to serve data from domains "c5.img.digitalriver.com" and "drh.img.digitalriver.com." (10/10/2012 PM Tr. at 155:4-156:4.) The jury also heard expert testimony from Dr. Keller that Akamai acts on behalf of Digital River by caching copies of Digital River content for faster access:

Q. So -- and what does Akamai -- what is Akamai's business?
What do they do?

A. They bring somebody else's content closer to you. So in this particular case, if Digital River contracts with Akamai to push their content closer to you, they're actually pushing Akamai -- they're actually pushing Digital River's content and sort of making a copy of it closer to you so you can get it quicker, but essentially doing it on behalf of Digital River and acting as -- so -- acting as a -- operating on behalf of Digital River, so it's essentially Digital River's content that came from Digital River's server.

Q. So it would be a copy of what's on Digital River's own server, correct?

A. That's correct. It's a copy. It's simply copied closer to make it quicker to download.

(10/9/2012 PM Tr. at 86:20-87:10.) Therefore, although Akamai owned and operated servers storing the “look and feel” information on behalf of Digital River, the Court finds that there exists substantial evidence in the record to allow a reasonable inference by the jury that the servers were under the direction and control of Digital River.

E. Judgment as a matter of law that DDR’s damages model is unsupportable

Digital River contends that no reasonable jury could find that DDR was entitled to recover \$750,000 in damages from Digital River because DDR provided no evidence at trial that ties the value of sales transactions to infringement. (Dkt. No. 557 at 10.) The patentee bears the burden of proving damages, which includes the burden to “sufficiently [tie the expert testimony on damages] to the facts of the case.” *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315 (Fed. Cir. 2011). Digital River argues that product sales were not properly tied to DDR’s damages model because any such sales occurred only after the alleged infringement transpired. (Dkt. No. 557 at 10.) In its opposition, DDR responds that its damages expert, Dr. Chandler, presented substantial evidence tying his damages theory to the accused use of the invention, and that the fact that sales occur immediately after, not during, infringement is immaterial. (Dkt. No. 560 at 7.) The Court agrees with DDR.

The record reflects that Dr. Chandler explained how his damages method determines a value based on the economic benefits derived from the patented product or service. (10/9/2012 PM Tr. at 124:7-126:17; 144:4-5; 176:21-23) For example, Dr. Chandler testified:

And we looked at this in large sense with an understanding of how the private-label programs work in conjunction with the -- the Defendants. There is a basic operation for their normal course of business, and these incremental transactions contribute an extra margin, an additional margin, additional revenues that have their own profitability. And those revenues would not exist if it weren’t for the functionality of the patents-in-suit.

(*Id.* at 125:23-126:6.) In addition, the '572 patent itself ties the infringed claims to the commercial activity through the claim term “commerce object,” which the Court defined as a “third-party merchant’s: catalog, category, product (goods or services), or dynamic selection,” and the claim term “merchant,” which the Court defined as a “[p]roduce, distributor, or reseller of goods or services to be sold.” (Dkt. No. 560 at 6-7.)

Ultimately, the jury considered the evidence presented and awarded DDR \$750,000 for Digital River’s infringement of the '572 patent, significantly less than the amount DDR was seeking. On balance, the Court has no basis from which to find that the verdict lacks a sufficient evidentiary basis that a reasonable jury could not have found as the jury did in this case.

F. Conclusion

Based on the foregoing, the Court **DENIES** Defendant Digital River, Inc.’s Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) (Dkt. No. 540).

V. NLG’S RENEWED MOTION FOR JUDGMENT AS A MATTER OF LAW PURSUANT TO FED. R. CIV. P. 50(B) (DKT. NO. 539)

NLG seeks judgment as a matter of law pursuant to Fed. R. Civ. P. 50(b) to (1) vacate the jury verdict of direct infringement of the asserted claims in the '572 and '399 patents, (2) vacate the jury verdict of no invalidity of the asserted claims in the '572 and '399 patents, (3) vacate the jury award because the Court improperly excluded evidence of non-accused websites, and (4) set aside or reduce the damages award as grossly excessive and against the greater weight of the evidence. Interestingly however, NLG does not move for a new trial pursuant to Rule 59 on the grounds that the jury verdict is against the weight of the evidence.

A. Judgment as a Matter of Law Regarding Direct Infringement

NLG first contends that the jury determination of direct infringement is not supported by substantial evidence because DDR's infringement expert, Dr. Keller, did not establish all of the requisite claim elements. (Dkt. No. 539 at 4.)

i. The "look and feel" elements

NLG argues that Dr. Keller failed to offer competent or satisfactory evidence of the correspondence of look and feel between the host and NLG websites because he offered only conclusory and non-specific statements about how the "look and feel" elements are satisfied. On review of the record, the Court disagrees. As an initial matter, the jury had the published images of all nine website pairs as evidence before it to make the ultimate factual determination that the look and feel of the host corresponded to the accused NLG websites. (*See* PX617, pp. 1-2, 20-21, 35-36, 49-52, 53-54, 55-56, 57-60, 61-62, 63-64.) Additionally, DDR presented expert testimony comparing the websites pairs for substantial similarities and listing out the similarities in a demonstrative exhibit before the jury. (10/9/2012 PM Tr. at 8:3-36:22.) Thus, the jury's verdict is supported by substantial evidence of infringement as to the "look and feel" elements.

ii. Claim 17 of the '572 patent

NLG contends that there is no substantial evidence that NLG directly infringes step (a) of claim 17 in the '572 patent by controlling or directing its partners to provide links to NLG's site on their host sites. (Dkt. No. 539 at 6.) However, both DDR's expert witness, Dr. Keller, and NLG's expert witness, Mr. Gray, testified at trial that NLG gives the URL or link to their partners to place on their host websites for customers to access the outsource website. (10/9/2012 PM Tr. at

17:15-23; 10/11/2012 AM Tr. at 126:11-19.) Thus, the jury was presented with evidence sufficient to show that NLG controls its partners' action by giving them the link to place on their host sites.

iii. Claim 13 of the '572 patent

NLG argues that DDR did not establish that the NLG computer processor is in communication through the Internet with the host web page as required by claim 13 of the '572 patent. (Dkt. No. 539, at 6.) However, DDR's expert witness testified that "When the computer server receives a request, when a link is clicked on or activated on the host webpage, that's how the host webpage is communicating through the Internet with the computer processor or the server." (10/9/2012 PM Tr., at 12:17-25.) Thus, the record contains clear and substantial evidence to support a jury finding that this claim element is met.

iv. Claims 1 and 19 of the '399 patent

NLG argues that DDR did not establish that its system automatically recognizes or identifies the source web page as required by claims 1 and 19 of the '399 patent. (Dkt. No. 538 at 7.) Although NLG acknowledges that Dr. Keller's testimony and his report establish that the computer processor determines the partner using a code (e.g., OBWEB for Orbitz), NLG contends there is no evidence that the computer processor identifies the source page. (*Id.* at 7-8). However, NLG does not show where in the claim language or the Court's claim construction is there a requirement for a party to recognize the exact web address of the source web page to infringe. When opposing experts differ on how a claim limitation is met, as is the case here, it is up to the jury to decide which opinion is more credible in light of the evidence. In this case, the jury made such a determination based on substantial evidence in the record to support their finding that this claim element is met.

v. *Infringement for more than one day*

NLG also takes issue with the fact that DDR did not show infringement except for the single days on which Dr. Keller examined each website. (Dkt. No. 539 at 8.) However, Dr. Keller testified that, in forming his opinions, he considered the systems as a whole, “both documents about them and source code,” including “the date that they -- that they used to operate these systems” and “deposition transcripts where the people who work for the Defendants describe how their systems operated.” (10/9/2012 AM Tr. at 80:18-81:17.) In addition, Dr. Keller testified that, “with respect to the host websites that are partners with the Defendants,” he “looked at the websites sometimes the present current website, also past websites in order to be able to see whether the look and feel of the outsource website matches an overall appearance, the look and feel of the host website.” (*Id.*) Dr. Keller further testified that he looked at “past websites” using Internet archives. (*Id.* at 81:16-82:3.)

Dr. Keller also reviewed technology NLG was currently using and compared that to “different technology” that NLG used in the past and found that although the “software [that] implemented [it] changed, ... the basic functionality is unchanged” and “the data is the same,” including “the same data describing the stores, the look-and-feel description, et cetera.” (10/9/2012 PM Tr. at 3:22-4:15.) Moreover, Dr. Keller testified that, from his examination of source code throughout the period of infringement, he did not find anything that “had changed in any substantial way” compared to the examples that he gave during specific testimony discussing the various hosts. (*Id.* at pp. 4-45.)

The record before the Court and the evidence presented at trial is clear that Dr. Keller considered the accused systems as a whole, including the dates of operation, how the systems

operated, the current website, as well as past websites. There is substantial evidence to support the jury's finding that NLG infringed for more than the one day during which a screenshot was captured.

B. Judgment as a Matter of Law Regarding Invalidity For Failing to Claim Patentable Subject Matter

NLG asks the Court to find the asserted claims of the '572 and '399 patent invalid as unpatentable subject matter under 35 U.S.C. § 101 because the invention is merely a business model known as "syndicated commerce" applied to the Internet. (Dkt. No. 539 at 9.) NLG points to the trial transcript for support because the named inventors used the word "idea" at least 25 times to describe his invention. NLG argues that there is nothing computer-specific about making two e-commerce web pages look like each other, and the asserted claims recite only generic functionalities that any general purpose computer can perform.

i. Applicable Law

35 U.S.C. § 101 defines the four categories of inventions or discoveries that are eligible for patent protection:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. "In choosing such expansive terms ... modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope." *Bilski v. Kappos*, 130 S.Ct. 3218, 3225 (citing *Diamond v. Diehr*, 450 U.S. 175, 308, 100 S.Ct. 2204 (1981)). "Congress took this permissive approach to patent eligibility to ensure that 'ingenuity should receive a liberal encouragement.' " *Id.* (citing 450 U.S. at 308-309, 100 S.Ct. 2204).

The Supreme Court has recognized three specific exceptions to the broad domain of patentable subject matter encompassed by § 101: “laws of nature, physical phenomena, and abstract ideas.” *Bilski*, 130 S.Ct. at 3225. Laws of nature and physical phenomena are not patentable subject matter “because those categories embrace ‘the basic tools of scientific and technological work.’” *Research Corp. Techs., Inc. v. Microsoft Corp.*, 627 F.3d 859, 867-68 (Fed. Cir. 2010) (citing *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). The Court can determine invalidity of a patent under 35 U.S.C. § 101 for failing to claim patentable subject matter as a matter of law. *Arrhythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1055 (Fed. Cir. 1992).

However, the rule against patents on naturally occurring things is “not without limits,” for “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” and “too broad an interpretation of this exclusionary principle could eviscerate patent law.” *Association for Molecular Pathology, et al. v. Myriad Genetics, Inc., et al.*, --- S.Ct. ---, 2013 WL 2631062, at *7 (citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S.Ct. 1289, 1293 (2012)). “As we have recognized before, patent protection strikes a delicate balance between creating ‘incentives that lead to creation, invention, and discovery’ and ‘imped[ing] the flow of information that might permit, indeed spur, invention.’” *Id.* (citing 132 S.Ct. at 1305). Moreover, “a process is not unpatentable simply because it contains a law of nature or a mathematical algorithm,” and “an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” *Diamond v. Diehr*, 450 U.S. 175, 187, 100 S.Ct. 1048 (1981) (internal quotation marks omitted).

In addition, “[a]bstractness, also a disclosure problem addressed in the Patent Act in section 112, also places subject matter outside the statutory categories.” *Research Corp.*, 627 F.3d at 868. An abstract idea “should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.” *Id.* “[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.” *Id.* at 869.

Furthermore, “it bears remembering that all issued patent claims receive a statutory presumption of validity ... that presumption applies when § 101 is raised as a basis for invalidity in district court proceedings.” *CLS Bank Int’l, et al. v. Alice Corp. Pty. Ltd.*, 2013 WL 1920941, at *12 (Fed. Cir. May 10, 2013) (Lourie, J., *et al.*, concurring).

ii. Analysis

NLG only asserts the application of the “abstract ideas” exception in this case. NLG contends claims 13, 17, and 20 of the ’572 patent and claims 1, 3 and 9 of the ’399 patent are invalid under 35 U.S.C. § 101 because they do not satisfy the machine-or-transformation test and otherwise disclose an abstract idea. Claims 13 and 17 of the ’572 patent are independent claims.

They read:

Claim 13. An e-commerce outsourcing system comprising:

a) a data store including a look and feel description associated with a host web page having a link correlated with a commerce object; and

b) a computer processor coupled to the data store and in communication through the Internet with the host web page and programmed, upon receiving an indication that the link has been activated by a visitor computer in Internet communication with the host web page, to serve a composite web page to the visitor computer with [sic] a look and feel based on the look and feel description in the data store and with content based on the commerce object associated with [sic] the link.

Claim 17. An e-commerce outsourcing process comprising the steps of:

- a) storing a look and feel description associated with a first website in a data store associated with a second website;
- b) including within a web page of the first website, which web page has a look and feel substantially corresponding to the stored look and feel description, a link correlating the web page with a commerce object; and
- c) upon receiving an activation of the link from a visitor computer to which the web page has been served, sending to the visitor computer from the second website a composite web page having a look and feel corresponding to the stored look and feel description of the first website and having content based on the commerce object associated with the link.

Claim 1 of the '399 patent is an independent claim. It reads:

Claim 1. A method of an outsource provider serving web pages offering commercial opportunities, the method comprising:

- (a) automatically at a server of the outsource provider, in response to activation, by a web browser of a computer user, of a link displayed by one of a plurality of first web pages, recognizing as the source page the one of the first web pages on which the link has been activated;
 - (i) wherein each of the first web pages belongs to one of a plurality of web page owners;
 - (ii) wherein each of the first web pages displays at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants; and
 - (iii) wherein the selected merchant, the outsource provider, and the owner of the first web page are each third parties with respect to one other;
- (b) automatically retrieving from a storage coupled to the server pre-stored data associated with the source page; and then
- (c) automatically with the server computer-generating and transmitting to the web browser a second web page that includes:
 - (i) information associated with the commerce object associated with the link that has been activated, and
 - (ii) a plurality of visually perceptible elements derived from the retrieved pre-stored data and visually corresponding to the source page.

Claim 13 is a system claim. Claim 17 and claim 1 are process and method claims. The Court finds no meaningful distinction between the asserted “system,” “process,” and “method” claims for purposes of this § 101 analysis, and will consequently analyze them together. *Bancorp Services, L.L.C. v. Sun Life Assurance Co. of Canada (U.S.), et al.*, 687 F.3d 1266, 1276-77 (Fed. Cir. 2012).

In its analysis, the Court looks “not just to the type of claim but also ‘to the underlying invention for patent-eligibility purposes.’” *Id.* (citing *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1374 (Fed. Cir. 2011)). Thus, as the Supreme Court has explained, the form of the claims should not trump basic issues of patentability. *See Parker v. Flook*, 437 U.S. 584, 593, 98 S.Ct. 2522 (1978). Here, each of the claims at issue involves storing and serving webpages having the similar look and feel of another and different webpage. There is little material difference between these categories of claims in the asserted patents for patentability analysis.

NLG’s primary argument boils down to a contention that the claims disclose the business method of making two e-commerce web pages look alike; the method is no more than an abstract idea that is not dependent on computer components. In response, DDR asserts that the invention is not a method of doing business, but rather methods of displaying composite web pages that require the computer and processor to have specific tangible parts, be programmed in certain particular ways, contain specific data, and be capable of performing specific steps recited in the claims. On review of the claims at issue, the Court concludes that they are not “so manifestly” abstract as to override the statutory language of § 101. *Research Corp.*, 627 F.3d at 868.

The claimed e-commerce outsourcing system discloses a specific set of physical linkages, including, coupling between the data store and the processor, the data store storing a look and feel description associated with a host web page and the processor programmed in certain ways to serve a composite web page. The claimed e-commerce outsourcing process requires a similar interaction between a data store storing a look and feel description of a web page and an activation of a link from a visitor computer to receive a composite web page. The method of an outsource provider also discloses a server that responds to activation by a web browser of a computer user by

retrieving pre-stored data from storage, then generating and transmitting visual elements corresponding to the source page. Each of these claimed inventions “presents functional and palpable applications in the field of computer technology.” *Research Corp.*, 627 F.3d at 868. Like the claimed invention in *Research Corp.*, the process of displaying composite web pages represents an improvement to computer technologies in the marketplace. “[I]nventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract” as to be ineligible for patent protection. *Id.*

The claimed invention also passes the machine-or-transformation test. “Under the Court of Appeals’ formulation, an invention is a ‘process’ only if: ‘(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.’” *Bilski*, 130 S.Ct., at 3225-6 (citing *Diamond*, 450 U.S. at 182). Although the machine-or-transformation test is not the sole test for deciding whether an invention is patent-eligible, it remains a useful and important indicator in the § 101 analysis. *Id.* at 3227.

As discussed above, the asserted claims disclose a specific set of physical linkages that involve a data store, server, computer, that together, and through the claimed interconnectivity, accomplishes the process of displaying composite web pages having the look and feel of the source web page. NLG urges the Court to find the invention is only a business method of making two web pages look alike. While the ’572 and ’399 patents do, indeed, cover the concept of two web pages with visually corresponding elements, there is more to the asserted claims when considered as a whole. “*Diehr* emphasized the need to consider the invention as a whole, rather than ‘dissect[ing] the claims into old and new elements and then ... ignor[ing] the presence of the old elements in the analysis.’” *Bilski*, 130 S.Ct., at 3230 (citing *Diehr*, 450 U.S. at 177). When the asserted claims are

considered as a whole, the claimed invention lies in stark contrast to the facts of *Bancorp*. In *Bancorp*, the claimed “mathematical concept of managing a stable value protected life insurance policy” was found unpatentable as an abstract idea because mere mathematical computer was not dependent upon the computer components required to perform it. 687 F.3d at 1279-80. In contrast, the interactions and linkages of computer machinery to generate composite web pages in this case are integral to each of DDR’s asserted claims. Accordingly, the first prong of the machine-or-transformation test is satisfied. That being the case, this Court needs not address the transformation prong at this time.

The Court is also not persuaded that the inventor’s use of the word “idea” at least 25 times to describe his invention is evidence of unpatentable subject matter. The inventor’s testimony was given during a one week trial, and it is not unusual to explain a patent claim as a “gist” or “core idea.” Such testimony is not instructive that a claim is an abstract idea for purposes of § 101 patentability. Moreover, “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” yet, “too broad an interpretation of this exclusionary principle could eviscerate patent law.” *Mayo*, 132 S.Ct. at 1293.

Accordingly, the Court does not find that NLG has met its burden to show by clear and convincing evidence that the asserted claims of the ’572 and ’399 patents are invalid for failure to claim patentable subject matter under 35 U.S.C. § 101.

C. Judgment as a Matter of Law that the Asserted Claims are Indefinite as a Matter of Law

NLG contends that the “look and feel” terms render the asserted claims invalid as indefinite because there is no objective standard for determining whether a pair of web pages has the same “look and feel.” (Dkt. No. 539 at 16.) NLG’s argument is essentially a repeat of Digital

River's renewed motion for judgment of law on the same subject (Dkt. No. 540). Although Digital River's motion addressed only the '572 patent and not the '399 patent, the indefiniteness arguments center on similar claim terms present in both patents. The Court previously construed "visually perceptible elements" in the '399 patent to mean "look and feel elements that can be seen." (Dkt. No. 309 at 10.) Thus, the Court's ruling that Digital River has not met its burden to show by "clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area," is equally applicable to NLG's parallel arguments. *Halliburton*, 514 F.3d at 1249-50.

The one extra point that NLG makes in this Motion is that indefiniteness can be found in DDR's inconsistent infringement contentions, where Dr. Keller opined that web page pairs for NLG and its partners have the same look and feel, whereas web page pairs for the current American Airlines page are not alleged to have the same look and feel. (Dkt. No. 539 at 18.) For support, NLG cites Dr. Keller's trial testimony. (10/9/2012 PM Tr. at 62:4-9.) In response, DDR clarifies that shortly after NLG's citation of Dr. Keller's testimony, and in the same testimony sequence, Dr. Keller said "I haven't made an opinion as to whether they are substantially the same or not right now in my report." (10/9/2012 PM Tr. at 68:4-6.) The Court does not find Dr. Keller's testimony to be inconsistent. The Court finds that NLG has failed to meet its burden by clear and convincing evidence to establish that the "look and feel" claim term is insolubly ambiguous.

Accordingly, judgment as a matter of law as to a finding of indefiniteness is denied.

D. Judgment as a Matter of Law that the Court Improperly Excluded Evidence of Non-accused Websites

NLG contends the Court committed prejudicial error by precluding it from questioning witnesses or eliciting testimony relating to non-accused websites, but does not identify the remedy it seeks. (Dkt. No. 539.) Although this is raised in a 50(b) motion, NLG's argument is more in line with the requisite standard for a motion for new trial under Rule 59. "A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course." *Transworld Drilling*, 773 F.2d at 612-13. Therefore, the Court will construe this issue as a request for a new trial.

The core of NLG's contention is that the Court acted unfairly by excluding evidence of non-accused websites that run on the same platform as the accused websites, although such evidence is "directly relevant to issues of non-infringement, invalidity for indefiniteness, and invalidity for failing to claim patentable subject matter," and "would have helped to make clear the issues in this case for the Court and the jury." (Dkt. No. 539 at 19.) In response, DDR argues that the Court did not bar NLG from questioning witnesses or eliciting testimony relating to non-accused websites generally. The Court agrees. The Court's grant of DDR's motions *in limine* Nos. 2 and 3 (Dkt No. 481) was not a definitive ruling on the admissibility of evidence, but is merely an order requiring the offering party to first approach the bench and seek leave from the Court prior to mentioning such matters before the jury. When the parties approached the bench on a particular evidentiary matter regarding the American Airlines site, the Court considered the parties arguments, and exercised its discretion in making a limited ruling:

The Court: "Okay. There is a clear point in time at which the Plaintiffs have accused you of infringement. The sites and screenshots that take place outside

of that clear point of reference in time, to me, I don't see the relevance. That's what I understand the basis of your objection is.

Mr. Crosby: That is, yes.

The Court: You're welcome -- you're welcome to cross-examine this witness on materials that come from his report that relate to the period of time in which your client's accused of infringement, but to put up screenshots that are later in time than the period of the infringement or the accused infringement is potentially confusing and irrelevant.

(10/9/2012 PM Tr. at 71:6-19.) Nonetheless, the Court still permitted trial testimony relating to the non-accused American Airlines website, even though NLG may consider it to be limited. (*Id.* at 67:19-68:17.)

Also, the Court does not find that NLG has shown that the evidence it would have presented about the non-accused websites "points so strongly and overwhelmingly" in its favor that reasonable persons could not have arrived at a contrary conclusion as the jury verdict. *Dawson*, 978 F.2d at 208. NLG presents no specific reasons why the jury would have ruled in NLG's favor had they seen more evidence of non-accused websites; its arguments can be boiled down to hollow allegations that such evidence "would have helped to make clear the issues in this case." (Dkt. No. 539 at 19.) Accordingly, the Court does not find that it has precluded NLG from questioning witnesses or eliciting testimony relating to non-accused websites or permitted such prejudice toward NLG as to warrant a new trial.

E. Judgment as a Matter of Law that the Jury's Damages Award Should be Set Aside

NLG contends that the jury's damages award should be set aside or reduced because it is grossly excessive and against the greater weight of the evidence. NLG argues the damages award is flawed and lists multiple reasons why DDR's damages claim was improper, including application of the 5.5% royalty rate, ignoring deductible costs, including telephone sales in the royalty base, and failure to consider acceptable non-infringing substitutes. DDR responds that

even if NLG's criticisms are correct, showing error in DDR's damages claim does not demonstrate any error in the jury's damages award. The Court agrees. Determining the credibility of the evidence and weighing the evidence are within the exclusive purview of the jury. *Reeves*, 530 U.S. at 150-51. Absent evidence that points so overwhelmingly in favor of NLG that no reasonable jury could return a contrary verdict, the Court properly assumes that the jury chose to believe or disbelieve the testimony they heard as a part of weighing all the evidence and then reaching their verdict. *RSR Corp.*, 426 F.3d at 296.

NLG also argues that the damages award is grossly excessive because DDR did not establish infringement for more than one specific date for which Dr. Keller presented screen shots in his report. This is an obvious repetition of NLG's earlier argument that DDR did not show infringement except for the single days on which Dr. Keller examined each website. (Dkt. No. 539, at 8.) As discussed earlier, the record is clear that Dr. Keller considered the accused systems as a whole and DDR's claims are not limited to the specific date the screen shots were captured.

The Court has no specific insights into how the jury precisely arrived at its award in this case. Consequently, NLG cannot attempt to reverse engineer the jury's math in reaching the \$750,000 award and use its substituted, and purely speculative, analysis to call the award excessive. Absent further insight into the jury's apportionment, the Court does not find that the verdict lacks sufficient evidentiary basis for a reasonable jury to find as this jury did in this case.

F. Conclusion

Based on the foregoing, the Court **DENIES** National Leisure Group, Inc.'s and World Travel Holdings, Inc.'s Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) (Dkt. No. 539).

VI. DIGITAL RIVER'S MOTION FOR NEW TRIAL PURSUANT TO FEDERAL RULE OF CIVIL PROCEDURE 59 (DKT. NO. 562)

Pursuant to Fed. R. Civ. P. 59, Digital River moves for a new trial with respect to invalidity of the '572 patent based on lack of enablement, invalidity based on anticipation and/or obviousness, non-infringement, and damages. (Dkt. No. 562.) All of Digital River's arguments, with the exception of the enablement issue, rely on the same arguments as addressed above in the section on Digital River's renewed judgment as a matter of law. Based on the same reasoning as discussed above, the Court disagrees with each of Digital River's arguments and does not find the verdict to be against the weight of the evidence. The Court will now specifically address the enablement argument.

A. Digital River waived its enablement defense as to the "look and feel" elements

Digital River contends that it is entitled to a new trial on the issue of whether the asserted claims of the '572 patent are invalid for lack of enablement because it fails to teach one of ordinary skill in the art the concept of "look and feel." (Dkt. No. 562 at 3-4.) Digital River argues that it had presented more than sufficient evidence at trial to support the submission of a question and instruction on enablement in the jury charge, which the Court denied. Digital River also argues that it was prejudiced by the Court's failure to instruct the jury where a lack of enablement constitutes an independent ground for invalidating all the asserted claims.

In response, DDR asserts that Digital River waived its new enablement defense by failing to disclose it in advance of trial, either through its interrogatory answers or its invalidity contentions. (Dkt. No. 564 at 1.) Although Digital River touched on lack of enablement in light of another claim term, DDR contends that none of those disclosures hint at a non-enablement defense relating to the "look and feel" term.

Local Patent Rule 3.3(d) requires each party opposing a claim of patent infringement to serve invalidity contentions which disclose “[a]ny grounds of invalidity based on indefiniteness under 35 U.S.C. § 112(2) or enablement or written description under 35 U.S.C. § 112(1) of any of the asserted claims.” On review of Digital River’s amended invalidity contentions, the Court finds that it only asserted lack of enablement based on the “link correlated with a commerce object” limitation. (*See* Dkt. No. 564, Ex. 3.) Digital River did not put forward a lack of enablement based on the “look and feel” element at any point before trial either by complying with its disclosure obligations, responding to discovery, or in its invalidity expert report. Further, Digital River did not raise this issue during trial. During the charge conference, the Court struck the non-enablement jury instruction because Digital River had presented no arguments or evidence at trial based on the disclosed enablement defense. Nonetheless, Digital River did not specifically mention lack of enablement of the “look and feel” term in making its objection. (10/12/2012 AM Tr. at 10:8-13:15.) In essence, Digital River did not provide notice to DDR or the Court of its enablement defense based on the “look and feel” term until raising it for the first time in their Rule 59 motion.

One purpose of Patent Rule 3.3 is for early disclosure and notice of the Defendant’s invalidity-based defenses to facilitate discovery and the preparation of both sides’ claims and defenses well in advance of trial. Just as a prior art reference has to be specifically disclosed on an element-by-element level in a claim chart format, a § 112(2) defense must at least identify the claim element that causes a claim to fail for lack of enablement. Contrary to Digital River’s argument, the Court does not find there to be sufficient disclosure of this issue in the pleadings or at any time prior to this motion. Additionally, this Court is not receptive to Digital River’s argument that it may disclose the specific theory of non-enablement for the first time in the trial

testimony. Such would emasculate Rule 3.3 and return the litigants to the discredited practice of trial by ambush.

For the foregoing reasons, the Court finds that Digital River has waived its enablement defense as to the “look and feel” element. Accordingly, the Court does not reach the merits of Digital River’s invalidity defense for lack of enablement of the “look and feel” element.

B. Conclusion

Based on the foregoing, the Court **DENIES** Defendant Digital River, Inc.’s Motion for New Trial Pursuant to Fed. R. Civ. P. 59 (Dkt. No. 562).

VII. CONCLUSION

For the reasons discussed, the Court: (1) **DENIES** Defendant Digital River, Inc.’s Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) (Dkt. No. 540); (2) **DENIES** National Leisure Group, Inc.’s and World Travel Holdings, Inc.’s Renewed Motion for Judgment as a Matter of Law Pursuant to Fed. R. Civ. P. 50(b) (Dkt. No. 539); and (3) **DENIES** Defendant Digital River, Inc.’s Motion for New Trial Pursuant to Fed. R. Civ. P. 59 (Dkt. No. 562).

So Ordered and Signed on this

Jun 20, 2013



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE



US006993572B2

(12) **United States Patent**
Ross, Jr. et al.

(10) **Patent No.:** **US 6,993,572 B2**
(45) **Date of Patent:** ***Jan. 31, 2006**

(54) **SYSTEM AND METHOD FOR
FACILITATING INTERNET COMMERCE
WITH OUTSOURCED WEBSITES**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(75) Inventors: **D. Delano Ross, Jr.**, Alpharetta, GA
(US); **Daniel D. Ross**, Dunwoody, GA
(US); **Joseph R. Michaels**, Marietta,
GA (US); **William R. May**, Atlanta,
GA (US); **Richard A. Anderson**,
Powder Springs, GA (US)

5,319,542	A	6/1994	King, Jr. et al.
5,515,270	A	5/1996	Weinblatt
5,537,314	A	7/1996	Kanter
5,590,197	A	12/1996	Chen et al.
5,596,702	A	1/1997	Stucka et al.
5,630,125	A	5/1997	Zellweger
5,699,528	A	12/1997	Hogan
5,710,887	A	1/1998	Chelliah et al.
5,712,979	A	1/1998	Graber et al.
5,715,314	A	2/1998	Payne et al.
5,717,860	A	2/1998	Graber et al.

(73) Assignee: **DDR Holdings, LLC**, Dunwoody, GA
(US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 104 days.

This patent is subject to a terminal dis-
claimer.

(Continued)

OTHER PUBLICATIONS

Yergeau, F. et al., "Internationalization of the Hypertext
Markup Language", RFC 2070, p. 1-43, Jan. 1997.*

(Continued)

(21) Appl. No.: **10/461,997**

(22) Filed: **Jun. 11, 2003**

(65) **Prior Publication Data**

US 2004/0148366 A1 Jul. 29, 2004

Related U.S. Application Data

(63) Continuation of application No. 09/398,268, filed on
Sep. 17, 1999, now Pat. No. 6,629,135.

(60) Provisional application No. 60/100,697, filed on Sep.
17, 1998.

(51) **Int. Cl.**

G06F 15/16 (2006.01)

G06F 17/21 (2006.01)

(52) **U.S. Cl.** **709/218; 715/501.1**

(58) **Field of Classification Search** 709/218,
709/219, 228; 715/501.1, 744, 746, 738,
715/760, 804; 705/26

See application file for complete search history.

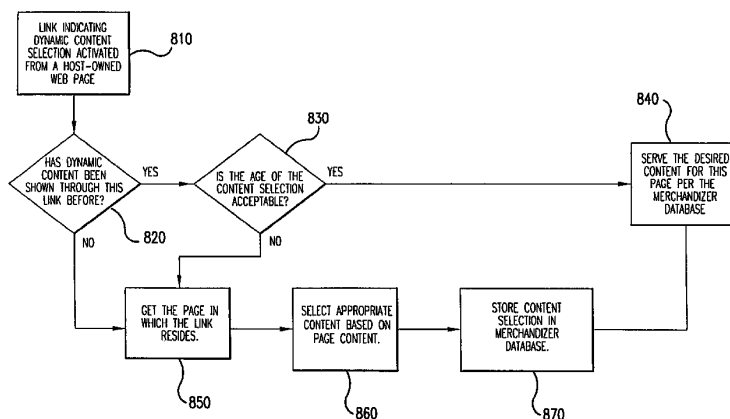
Primary Examiner—Jason D Cardone

(74) *Attorney, Agent, or Firm*—Louis J. Hoffman

(57) **ABSTRACT**

An e-commerce outsourcing system and method provides
hosts with transparent, context-sensitive e-commerce sup-
ported pages. The look and feel of a target host is captured
for future use. The host is provided with one or more links
for inclusion within a page on the host website that corre-
lates with a selected commerce object, which may be
contextually related to material in the page. The commerce
object can be a product, a product category, or a dynamic
selection indicator. Upon activation of the provided link, a
visitor computer is served with a page with the look and feel
of the host website and with content based upon the asso-
ciated commerce object. Where the commerce object is a
dynamic selection indicator, the content is selected at the
time of activation based upon an analysis of the page
containing the activated link.

27 Claims, 24 Drawing Sheets



US 6,993,572 B2

Page 2

U.S. PATENT DOCUMENTS

5,721,827	A	2/1998	Logan et al.	
5,724,424	A	3/1998	Gifford	
5,724,521	A	3/1998	Dedrick	
5,727,159	A	3/1998	Kikinis	
5,745,681	A	4/1998	Levine et al.	
5,796,952	A	8/1998	Davis et al.	
5,802,299	A	9/1998	Logan et al.	
5,809,481	A	9/1998	Baron et al.	
5,812,769	A	9/1998	Graber et al.	
5,819,285	A	10/1998	Damico et al.	
5,825,884	A	10/1998	Zdepski et al.	
5,848,396	A	12/1998	Gerace	
5,860,068	A	1/1999	Cook	
5,862,325	A	1/1999	Reed et al.	
5,878,219	A	3/1999	Vance, Jr. et al.	
5,884,033	A	3/1999	Duvall et al.	
5,884,045	A	3/1999	Kurihara	
5,890,175	A	3/1999	Wong et al.	
5,893,091	A	4/1999	Hunt et al.	
5,894,554	A	4/1999	Lowery et al.	
5,895,468	A	4/1999	Whitmyer, Jr.	
5,897,622	A	4/1999	Blinn et al.	
5,898,836	A	4/1999	Freivald et al.	
5,907,830	A	5/1999	Engel et al.	
5,913,040	A	6/1999	Rakavy et al.	
5,913,202	A	6/1999	Motoyama	
5,915,243	A	6/1999	Smolen	
5,918,239	A	6/1999	Allen et al.	
5,926,798	A	7/1999	Carter	
5,930,765	A	7/1999	Martin	
5,933,811	A	8/1999	Angles et al.	
5,937,392	A	8/1999	Alberts	
5,940,834	A	8/1999	Pinard et al.	
5,940,843	A	8/1999	Zucknovich et al.	
5,948,061	A	9/1999	Merriman et al.	
5,956,709	A	9/1999	Xue	
5,963,915	A	10/1999	Kirsch	
5,978,766	A	11/1999	Luciw	
5,983,227	A	11/1999	Nazem et al.	
5,983,270	A	11/1999	Abraham et al.	
5,987,498	A	11/1999	Athing et al.	
5,991,735	A	11/1999	Gerace	
5,991,740	A	11/1999	Messer	
6,012,098	A *	1/2000	Bayeh et al.	709/246
6,023,714	A *	2/2000	Hill et al.	715/513
6,029,141	A	2/2000	Bezos et al.	
6,128,655	A *	10/2000	Fields et al.	709/219
6,141,666	A	10/2000	Tobin	
6,230,173	B1 *	5/2001	Ferrel et al.	715/513
6,253,188	B1	6/2001	Witek et al.	
6,629,135	B1 *	9/2003	Ross et al.	709/218
6,763,343	B1 *	7/2004	Brooke et al.	707/1

OTHER PUBLICATIONS

Hudson, S. et al., "Supporting dynamic downloadable appearances in an extensible user interface toolkit", ACM Symposium on User Interface Software and Technology, p 159-168, Oct. 1997.*

"Agent-Mediated Electronic Commerce: Issues, Challenges and Some Viewpoints", Hyacinth S. Nwana, Jeff Rosenschein, Tuomas Sandholm, Carles Sierra, Pattie Maes, and Rob Guttman, Proceedings of the 2nd International Conference on Autonomous Agents, pp. 189-196, May (1998).

"An Adaptive Algorithm for Learning Changes in User Interests", Dwi H. Widyantoro, Thomas R. Ioerger and John Yen, Proceedings of Conference on Knowledge and Information Management, pp. 405-412, Nov. (1999).

"A Multilevel Approach to Intelligent Information Filtering: Model, System, and Evaluation", ACM Transactions on Information Systems, vol. 15, Issue 4 (1997), pp. 368-399. Web Pages, <http://www.broadvision.com> (1996).

PCT International Search Report PCT/US99/21656 dated Jan. 25, 2000.

Dialog file 16 (database PROMT (R)), No. 6016914, BookSite launches version 3.0 of the popular electronic commerce web site. "Business Wife," 2 pp, Feb. 23, 1996. Dialog file 16 (database PROMT (R)), No. 6296727, "Amazon.com introduces "Amazon.com Associates"—a new model for internet-based commerce." Business Wife, 3 pp, Jul. 18, 1996.

Can Mixing 'Cookies' with Online Marketing be a Recipe for Heartburn? (Infoworld, vol. 18, No. 30), Jul. 22, 1996. RealTime Travel Info Available Online (Dailog database file 9, document 01107096), Jan. 17, 1995.

Online Growth Virtually Untapped; PC Vendors Taking More Advantage of Booming Sales (Computer Retail Week vol. 4, No. 64, p. 160), Jun. 6, 1994.

Selected documents from Incognito Café Web site describing Book Stacks Unlimited links partner program.

Resnick P., Iacovou, N., Suchak, M., Bergstrom P., and Riedl, J., GroupLens: An Open Architecture for Collaborative Filtering of Netnews. *Proceedings of ACM 1994 Conference on Computer Supported Cooperative Work*, Chapel Hill, NC, pp 175-186.

Balabanovic, M., and Shopham, Y., Fab: Content-Based Collaborative Recommendation. *Communications of the ACM*, vol. 40, No. 3, (Mar. 1997) pp 66-73.

"Places to Stay, Now WorldRes, Completes \$4 Million 1st -Round Venture"; news release from <http://www.wiredhotelier.com>; Mar. 4, 1997.

"Wordless Provides CVBs Free Internet Technology for Web/Voice Hotel Bookings"; news release from <http://www.wiredhotelier.com>; Jul. 22, 1997.

"San Diego's CVB Is First To Implement internet Reservations Through Worldres"; news release from <http://www.wiredhotelier.com>; Sep. 20, 1997.

"About WorldRes"; web page printout; URL: <http://web.archive.org/web/19970702032337/www.worldres.com>; 1997.

Christensen, Eric; "Mapping a More Complete Internet Strategy"; web page printout; URL: <http://web.archive.org/web/19970702032753/www.worldres.com>; 1997.

Dukay, Kristin. "Unifying a large corporate Web site: A case study of www.microsoft.com." Proc. IEEE Int'l Professional Communication Conference 1997, pp. 321-327.

"Marketing Software on the Internet: A White Paper"; Digital River, Inc.; 1998.

"Technology Solutions to Electronic Transactions: A White Paper"; Digital River, Inc.; 1998.

Form S-1, Amendment No. 4; filed with Securities and Exchange Commission, by Digital River, Inc.; Aug. 11, 1998.

"Worldres Teams Up With Yahoo!"; news release from <http://www.wiredhotelier.com>; Sep. 16, 1998.

Cimino JJ, et al. "Architecture for a Web-Based Clinical Information System that Keeps the Design Open and the Access Closed." Proc. AMIA Symp. 1998, pp. 121-125; Nov., 1998.

* cited by examiner

U.S. Patent

Jan. 31, 2006

Sheet 1 of 24

US 6,993,572 B2

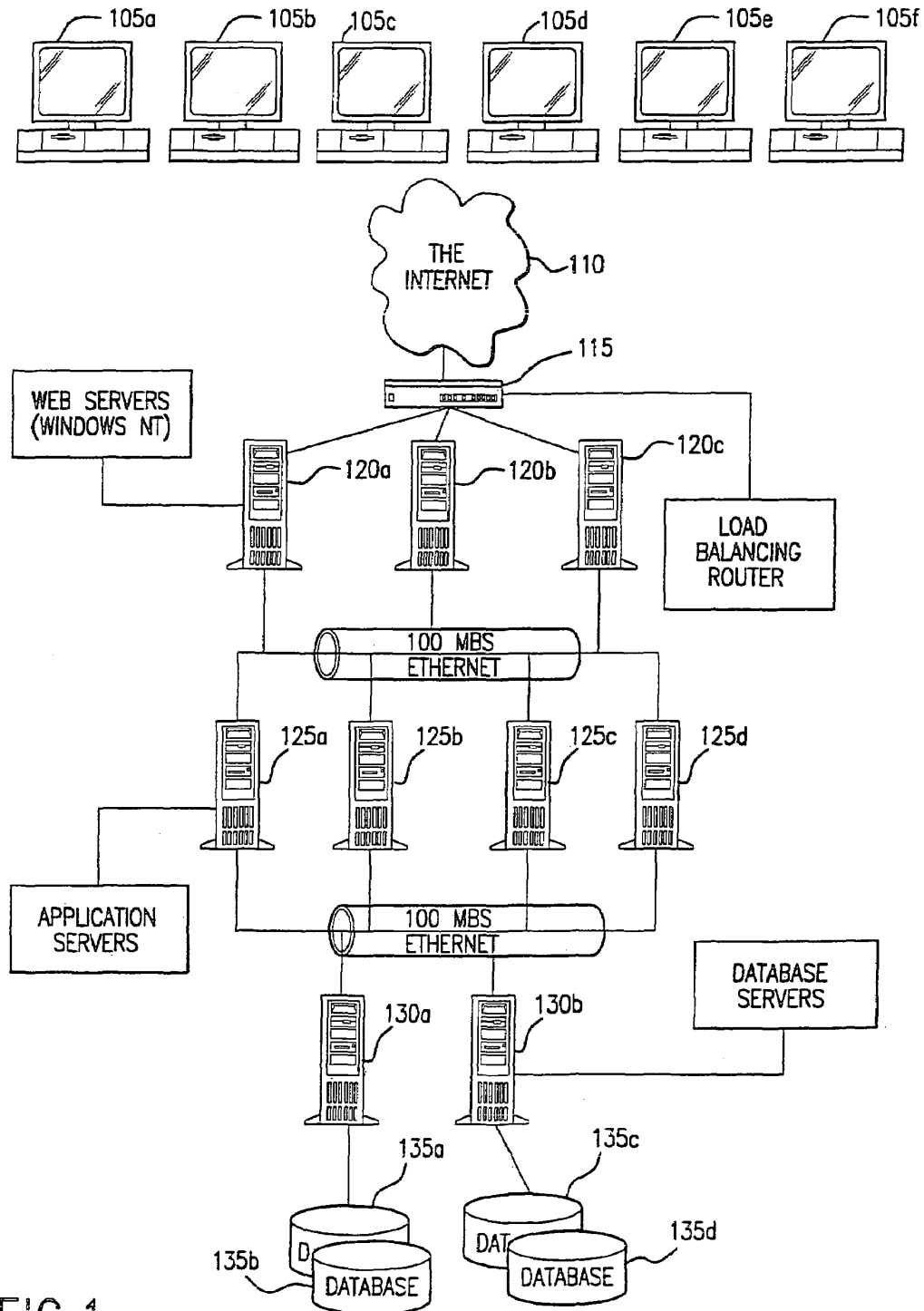


FIG.1

U.S. Patent

Jan. 31, 2006

Sheet 2 of 24

US 6,993,572 B2

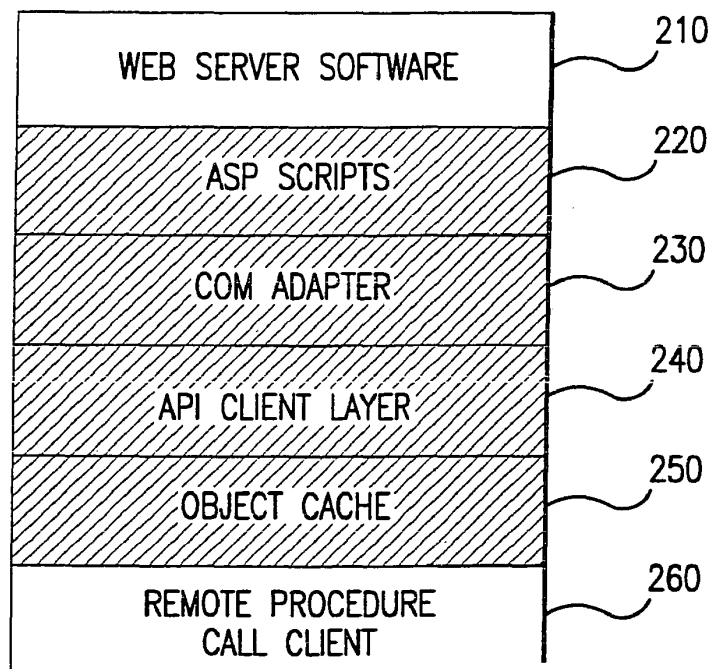


FIG. 2

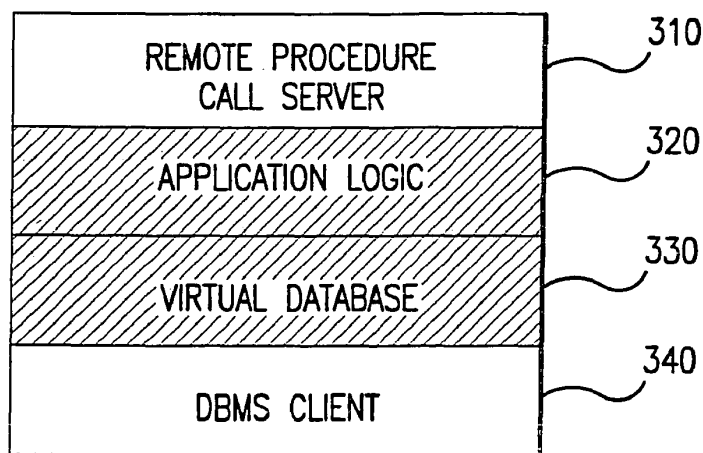


FIG. 3

U.S. Patent

Jan. 31, 2006

Sheet 3 of 24

US 6,993,572 B2

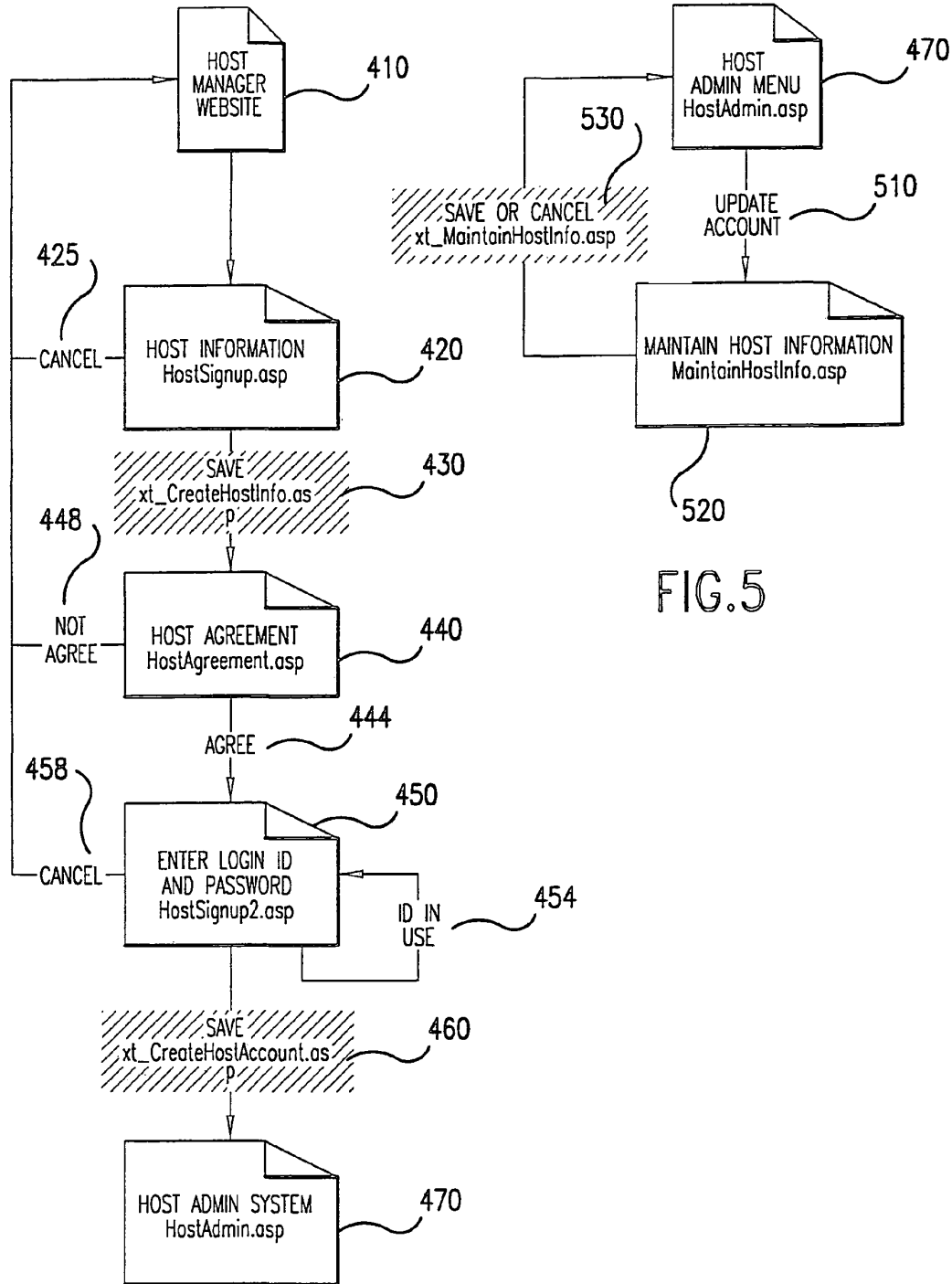


FIG. 4

FIG. 5

U.S. Patent

Jan. 31, 2006

Sheet 4 of 24

US 6,993,572 B2

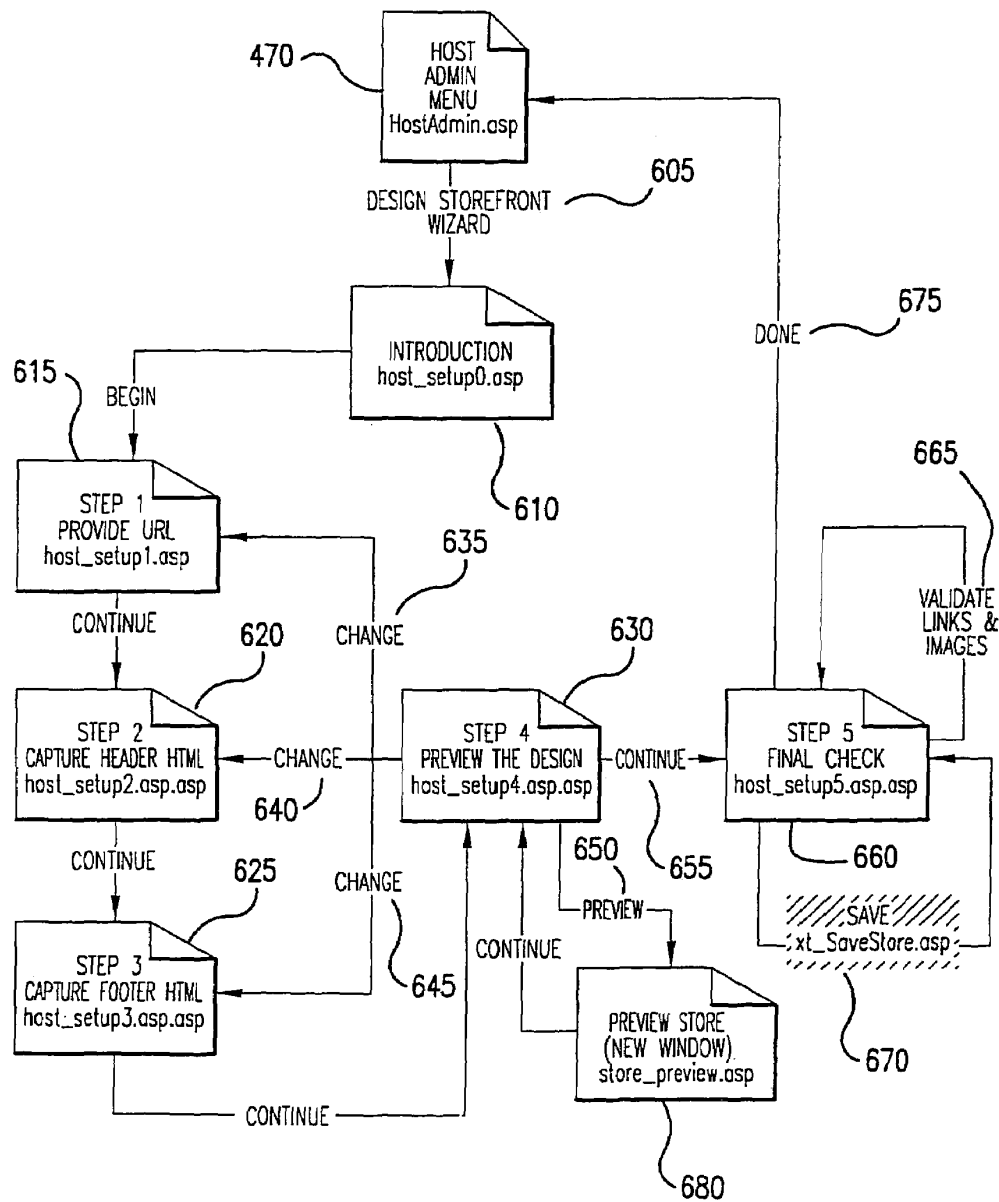


FIG. 6

U.S. Patent

Jan. 31, 2006

Sheet 5 of 24

US 6,993,572 B2

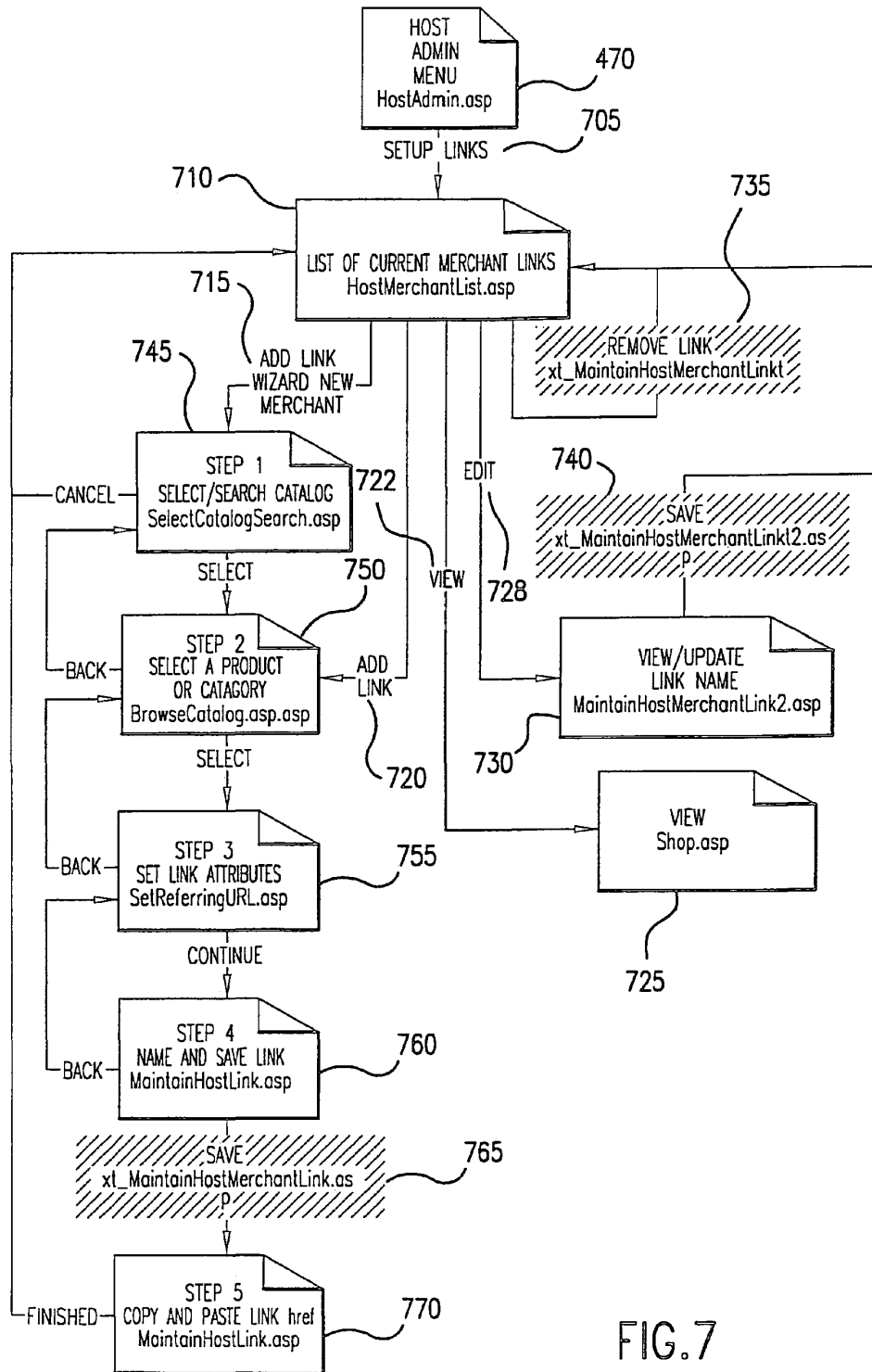


FIG. 7

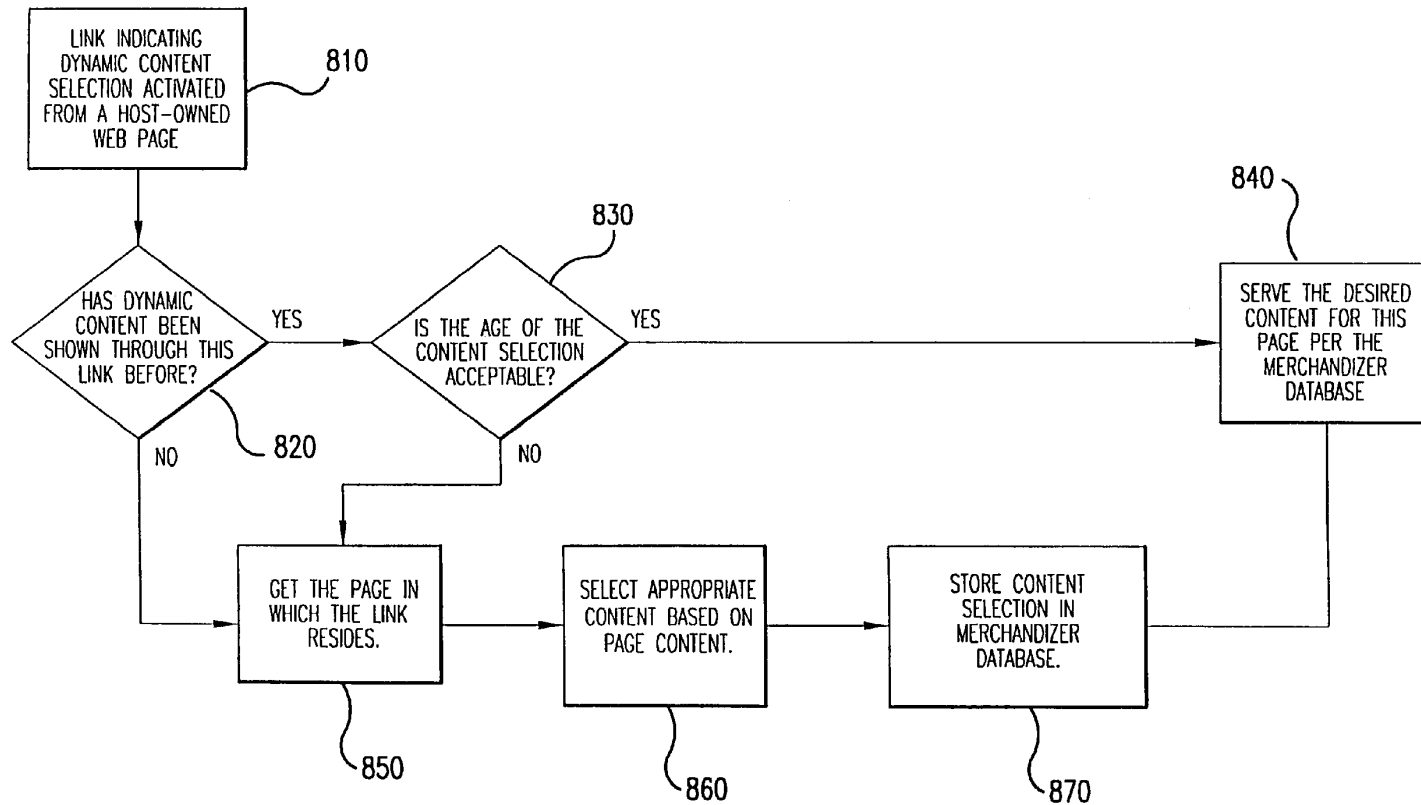


FIG. 8

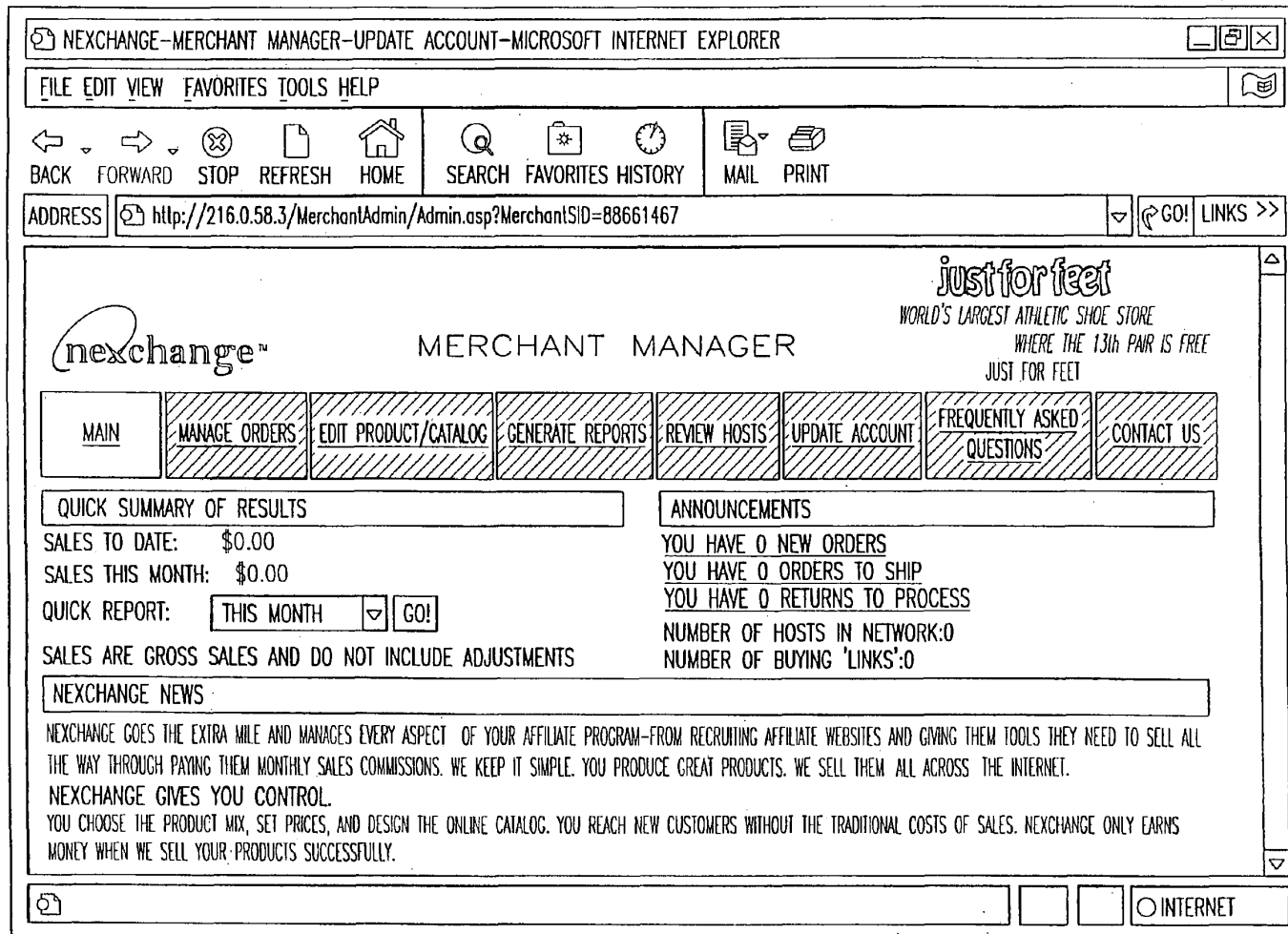


FIG.9

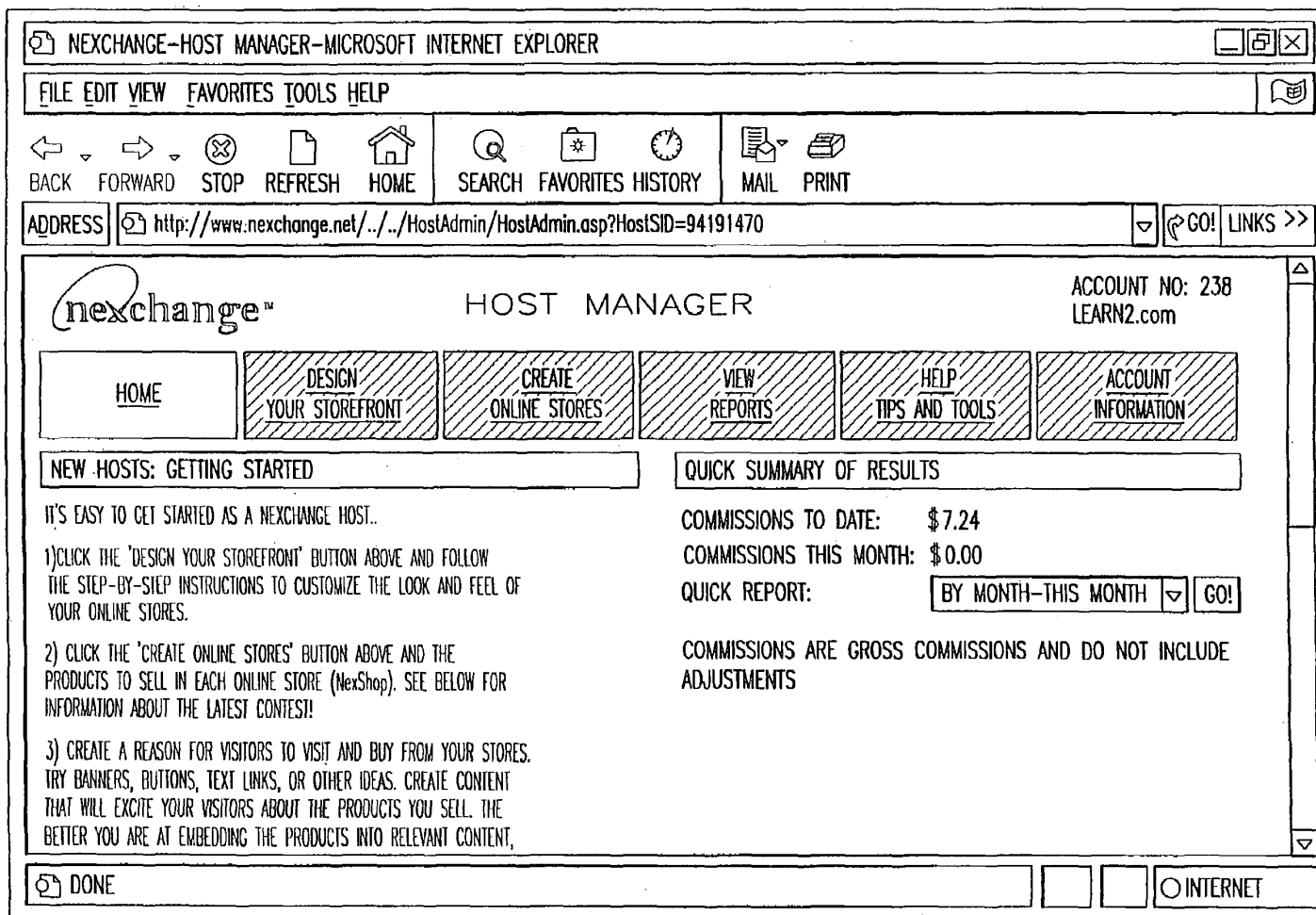


FIG. 10

FIG. 11

NEXCHANGE-STEP 1-MICROSOFT INTERNET EXPLORER

FILE EDIT VIEW FAVORITES TOOLS HELP LINKS >>

nexchange™ HOST MANAGER ACCOUNT NO: 2765 ABOUT.Com

HOME DESIGN YOUR STOREFRONT CREATE ONLINE STORES VIEW REPORTS HELP TIPS AND TOOLS ACCOUNT INFORMATION

DESIGN YOUR STOREFRONT

▶ STEP 1: PROVIDE URL
STEP 2: CAPTURE HEADER HTML
STEP 3: CAPTURE FOOTER HTML
STEP 4: PREVIEW YOUR NexShop
STEP 5: FINAL CHECK

HERE YOU WILL ENTER THE URL OF THE PAGE WE USE TO CAPTURE TEXT, IMAGES, AND LINKS THAT COMPRISE THE LOOK AND FEEL OF YOUR STOREFRONT

YOUR WEBSITE HOMEPAGE URL IS ALREADY ENTERED BELOW. IF THIS IS THE DIRECTORY THAT CONTAINS THE TEXT, IMAGES AND LINKS WE WILL USE TO DESIGN YOUR STOREFRONT, CLICK THE CONTINUE BUTTON.

IF YOU WILL BE USING THE TEXT, IMAGES, AND LINKS FROM ANOTHER PAGE ON YOUR WEBSITE, PLEASE ENTER THE BASE URL OF THAT WEBSITE PAGE. THE BASE URL IS THE DIRECTORY IN WHICH THAT SPECIFIC PAGE RESIDES. FOR EXAMPLE, IF YOUR WEBSITE IS LOCATED AT <http://www.website.com/>, BUT YOU WANT TO CAPTURE THE TEXT, IMAGES, AND LINKS LOCATED ON THE PAGE <http://www.website.com/directory/page.html>, THEN THE BASE URL IS <http://www.website.com/directory/>. IF THE PAGE YOU ARE USING CONTAINS AN HTML BASE TAG, THEN YOU WILL NEED TO ENTER THE URL OF THAT HTML BASE TAG.

PLEASE MAKE SURE YOU ENTER THE EXACT BASE URL, INCLUDING ALL DIRECTORIES. INCLUDE THE HTTP:// AT THE BEGINNING, AND END WITH A SLASH. WHEN YOU ARE FINISHED, CLICK THE CONTINUE BUTTON.

CONTINUE

FIG. 12

HOST MANAGER

ACCOUNT NO: 2765
ABOUT.Com

HOME

DESIGN
YOUR STOREFRONT

CREATE
ONLINE STORES

VIEW
REPORTS

HELP
TIPS AND TOOLS

ACCOUNT
INFORMATION

STEP 1: PROVIDE URL
 STEP 2: CAPTURE HEADER HTML
 STEP 3: CAPTURE FOOTER HTML
 STEP 4: PREVIEW YOUR NexShop
 STEP 5: FINAL CHECK

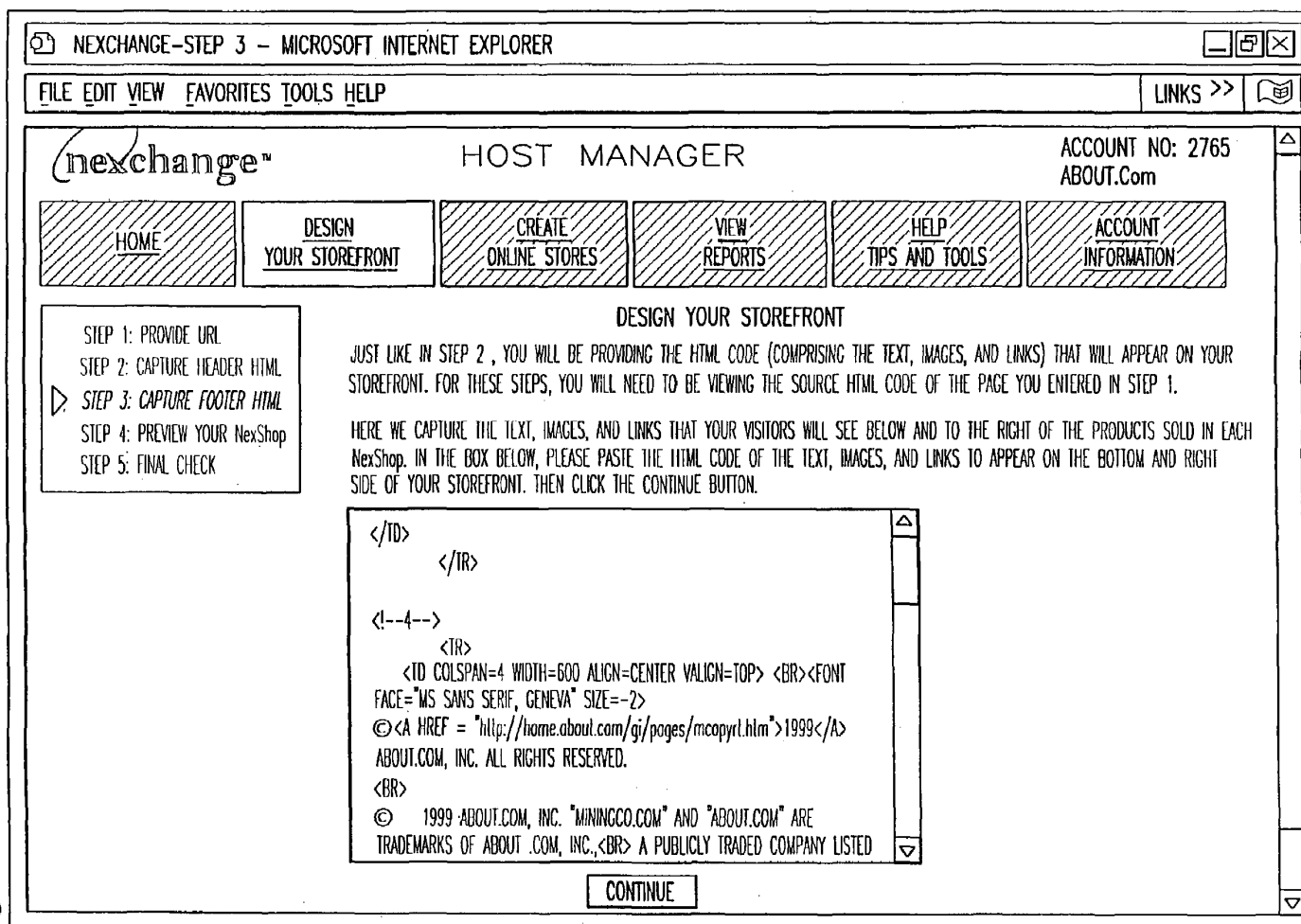
DESIGN YOUR STOREFRONT

IN STEP 2 AND STEP 3, YOU WILL BE PROVIDING THE HTML CODE (COMPRISING THE TEXT, IMAGES, AND LINKS) THAT WILL APPEAR ON YOUR STOREFRONT. FOR THESE STEPS, YOU WILL NEED TO BE VIEWING THE SOURCE HTML CODE OF THE PAGE YOU ENTERED IN STEP 1.

HERE, WE CAPTURE THE TEXT, IMAGES, AND LINKS THAT YOUR VISITORS WILL SEE ABOVE AND TO THE LEFT OF THE PRODUCTS SOLD IN EACH NexShop. IN THE BOX BELOW, PLEASE PASTE THE HTML CODE OF THE TEXT, IMAGES, AND LINKS TO APPEAR ON THE TOP AND LEFT SIDE OF YOUR STOREFRONT. IF YOUR HTML CODE CONTAINS A BASE TAG, PLEASE REMOVE IT. THEN CLICK THE CONTINUE BUTTON.

```

<!--TOPING CODE CREATED BY NESTOR FERNANDEZ-APRIL 21, 1999-->
<!--SERVER= www.about.com, TMOG=6303048865529, MINT=
328829035114348, IN2PID = , IN2ID = NULL, SESSION_ID = 328829035-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 TRANSITIONAL//EN">
<HTML>
<HEAD>
<TITLE> ABOUT.COM- HUMAN GUIDES. HUMAN INTERESTS. EXPERT GUIDANCE
FROM HUNDREDS OF GUIDES.</TITLE>
<META NAME="KEYWORDS" CONTENT="GAMES MUSIC TRAVEL SPORTS JOBS
FREE STUFF BOOKS SOFTWARE AUCTION CARS CHAT CASINO CITY MAPS
ENTERTAINMENT AIRLINES GIFTS JOKES HOTELS FUN CHAT ROOMS HOROSCOPE
        
```



NEXCHANGE-STEP 4-MICROSOFT INTERNET EXPLORER

FILE EDIT VIEW FAVORITES TOOLS HELP LINKS >>

nexchange™ HOST MANAGER ACCOUNT NO: 2765 ABOUT.Com

HOME	DESIGN YOUR STOREFRONT	CREATE ONLINE STORES	VIEW REPORTS	HELP TIPS AND TOOLS	ACCOUNT INFORMATION
------	---------------------------	-------------------------	-----------------	------------------------	------------------------

DESIGN YOUR STOREFRONT

STEP 1: PROVIDE URL
STEP 2: CAPTURE HEADER HTML
STEP 3: CAPTURE FOOTER HTML
▶ STEP 4: PREVIEW YOUR NexShop
STEP 5: FINAL CHECK

YOU'RE ALMOST DONE! CLICK THE PREVIEW BUTTON TO VIEW WHAT THIS STORE WILL LOOK LIKE. A NEW BROWSER WILL OPEN. PLEASE CAREFULLY REVIEW THE TEXT, IMAGES, AND LINKS. IF EVERYTHING IS CORRECT, AND THE SAMPLE "CELEBRATE THE SEASONS" BOOK IS LOCATED IN THE APPROPRIATE PLACE IN THE PAGE, CLOSE THE STORE PREVIEW WINDOW AND CLICK THE CONTINUE BUTTON BELOW.

IF CHANGES NEED TO BE MADE, CLICK ONE OF THE BUTTONS IN THE CENTER COLUMN BELOW, MAKE THE APPROPRIATE CHANGES, THEN CLICK THE CONTINUE BUTTON UNTIL YOU GET BACK TO THIS PAGE. FOR EXAMPLE, IF NONE OF YOUR WEBSITE IMAGES SHOW UP IN THE STORE PREVIEW, CLICK THE CHANGE THE BASE URL BUTTON AND CONFIRM THAT YOU ENTERED A WEBSITE DIRECTORY, NOT A SPECIFIC PAGE (.html). IF YOU WANT TO MAKE CHANGES TO THE DESIGN ABOVE THE "CELEBRATE THE SEASONS" STORE, CLICK THE CHANGE THE HEADER BUTTON WHEN YOU ARE DONE, CLICK THE CONTINUE BUTTON.

IF YOU WOULD LIKE TO HELP DESIGNING YOUR STOREFRONT, JUST SEND AN EMAIL TO hosthelp@nexchange.com AND WE WILL DESIGN YOUR STOREFRONT FOR FREE. PLEASE INCLUDE YOUR NAME, ACCOUNT NUMBER, AND WEBSITE URL IN THE MESSAGE.

PREVIEW YOUR STOREFRONT, THEN...	CLICK ONE OF THE BUTTONS BELOW TO MAKE CORRECTIONS	OR CLICK BELOW TO CONTINUE
PREVIEW	CHANGE THE BASE URL CHANGE THE HEADER CHANGE THE FOOTER	CONTINUE

FIG. 14

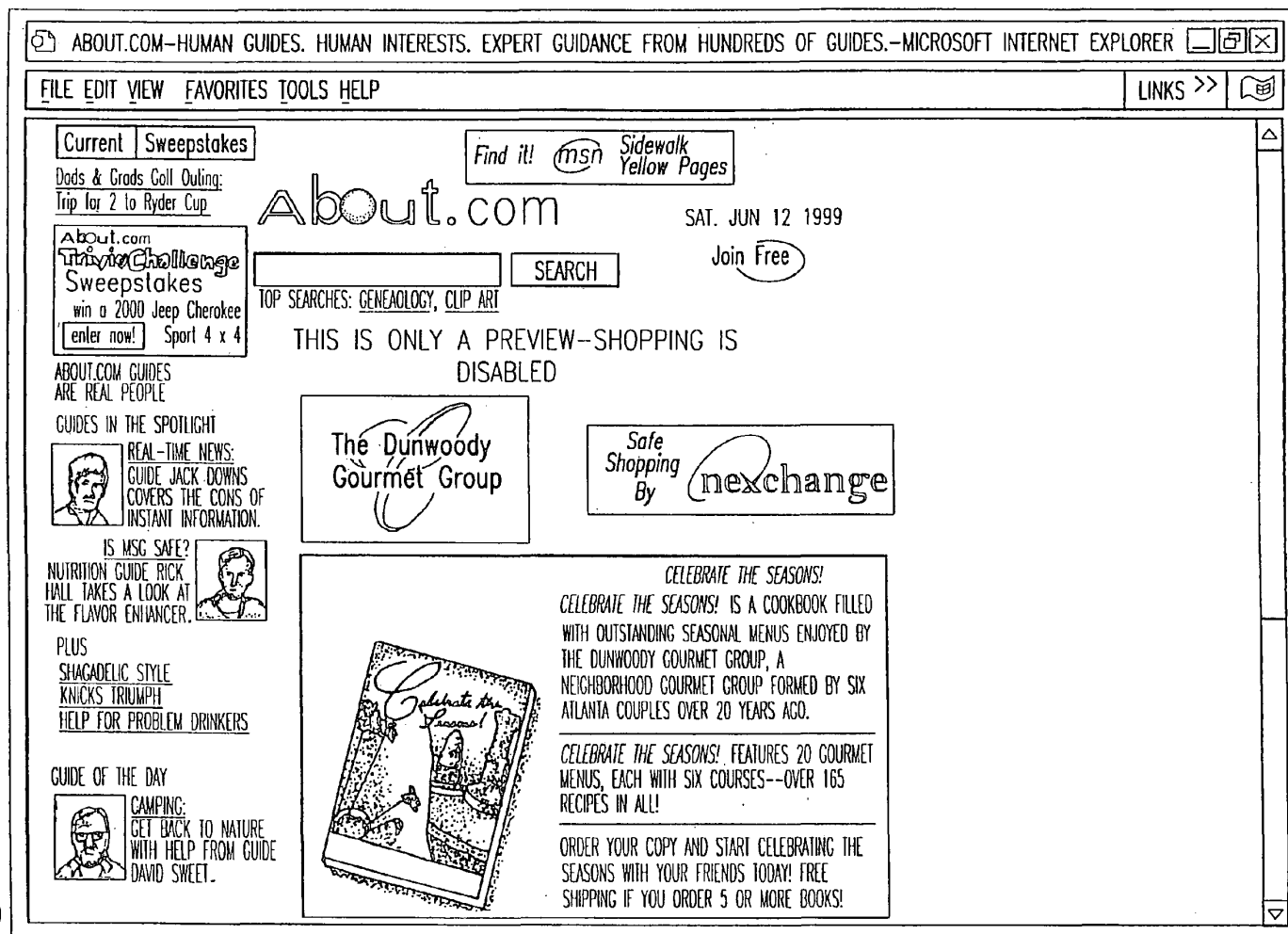


FIG.15

U.S. Patent

Jan. 31, 2006

Sheet 13 of 24

US 6,993,572 B2

FIG.16

NEXCHANGE-STEP 5-MICROSOFT INTERNET EXPLORER

FILE EDIT VIEW FAVORITES TOOLS HELP LINKS >>

nexchange™ HOST MANAGER ACCOUNT NO: 2765 ABOUT.Com

HOME DESIGN YOUR STOREFRONT CREATE ONLINE STORES VIEW REPORTS HELP TIPS AND TOOLS ACCOUNT INFORMATION

DESIGN YOUR STOREFRONT

STEP 1: PROVIDE URL
STEP 2: CAPTURE HEADER HTML
STEP 3: CAPTURE FOOTER HTML
STEP 4: PREVIEW YOUR NexShop
STEP 5: FINAL CHECK

IF YOU WOULD LIKE, THE HOST MANAGER SYSTEM WILL VALIDATE THE LINKS AND IMAGES IN YOUR STORE DESIGN. THIS WILL ENSURE THAT YOUR VISITORS WILL BE ABLE TO NAVIGATE WITHIN YOUR STORES AS EASILY AS THEY DO ON YOUR WEBSITE. WE RECOMMEND THAT YOU COMPLETE THIS FINAL STEP.

CLICK THE VALIDATE BUTTON AND THE HOST MANAGER WILL CONFIRM ALL OF THE IMAGES AND LINKS. IF IT FINDS PROBLEMS, THE SYSTEM WILL LIST THEM BELOW FOR YOU TO FIX.

WHEN YOU ARE FINISHED, OR IF YOU WANT TO SKIP THIS STEP, CLICK THE SAVE BUTTON.

VALIDATE SAVE

☐ LINKS ONLY
☐ IMAGES ONLY
☒ LINKS AND IMAGES

HOST MANAGER

ACCOUNT NO: 2765
ABOUT.COM

HOME

DESIGN YOUR STOREFRONT

CREATE ONLINE STORES

VIEW REPORTS

HELP TIPS AND TOOLS

ACCOUNT INFORMATION

DESIGN YOUR STOREFRONT

STEP 1: PROVIDE URL

STEP 2: CAPTURE HEADER HTML

STEP 3: CAPTURE FOOTER HTML

STEP 4: PREVIEW YOUR NexShop

▶ STEP 5: FINAL CHECK

IF YOU WOULD LIKE, THE HOST MANAGER SYSTEM WILL VALIDATE THE LINKS AND IMAGES IN YOUR STORE DESIGN. THIS WILL ENSURE THAT YOUR VISITORS WILL BE ABLE TO NAVIGATE WITHIN YOUR STORES AS EASILY AS THEY DO ON YOUR WEBSITE. WE RECOMMEND THAT YOU COMPLETE THIS FINAL STEP.

CLICK THE VALIDATE BUTTON AND THE HOST MANAGER WILL CONFIRM ALL OF THE IMAGES AND LINKS. IF IT FINDS PROBLEMS, THE SYSTEM WILL LIST THEM BELOW FOR YOU TO FIX.

WHEN YOU ARE FINISHED, OR IF YOU WANT TO SKIP THIS STEP, CLICK THE SAVE BUTTON.

IMAGE VALIDATION STATUS	LINK VALIDATION STATUS
VERIFYING IMAGE: 011	VERIFYING LINK: 028
VALID: 011	VALID: 028
INVALID: 000	INVALID: 000

VALIDATE

SAVE

☐ LINKS ONLY
☐ IMAGES ONLY
☒ LINKS AND IMAGES

FIG.17

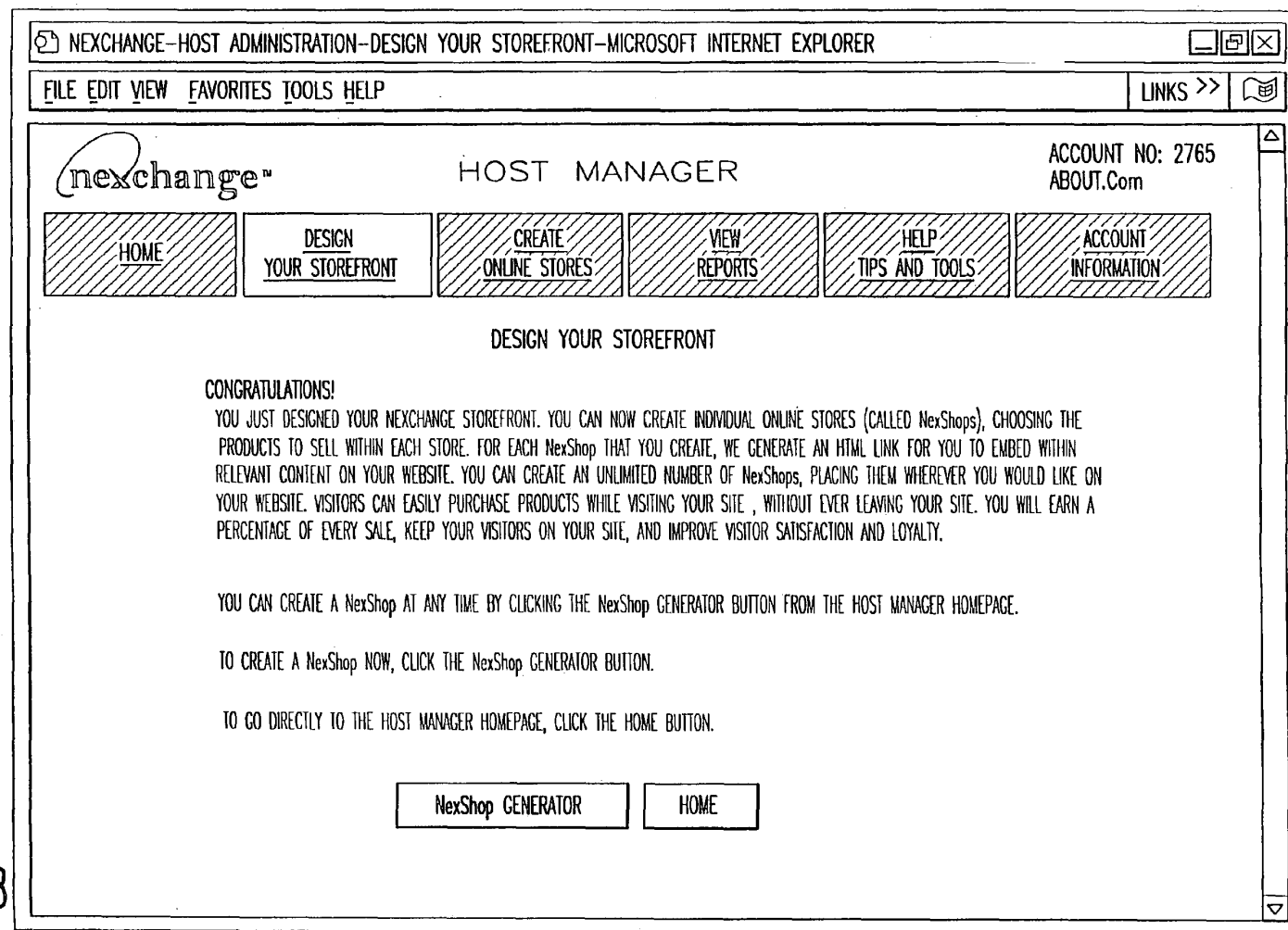
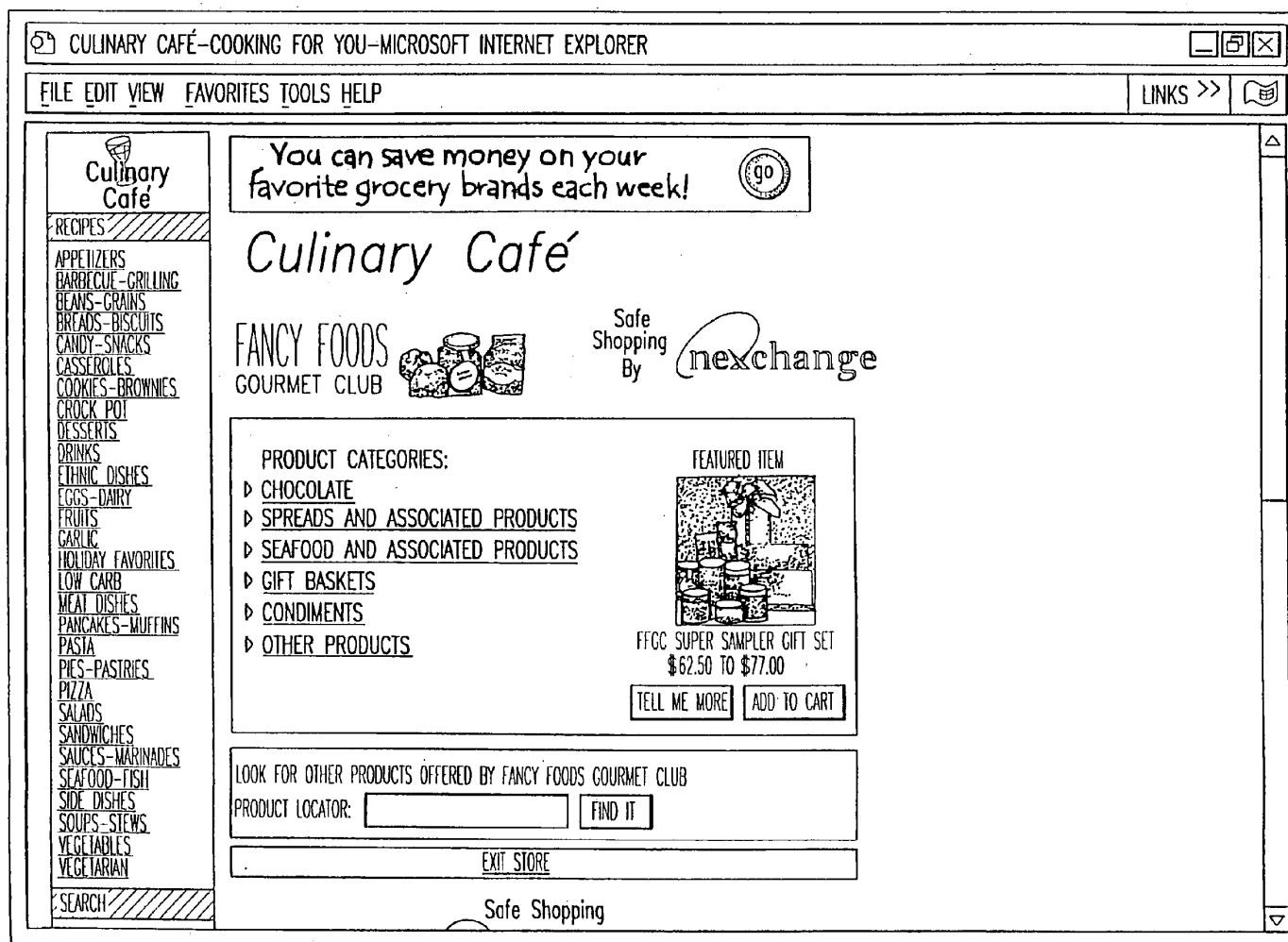


FIG.18

FIG.19



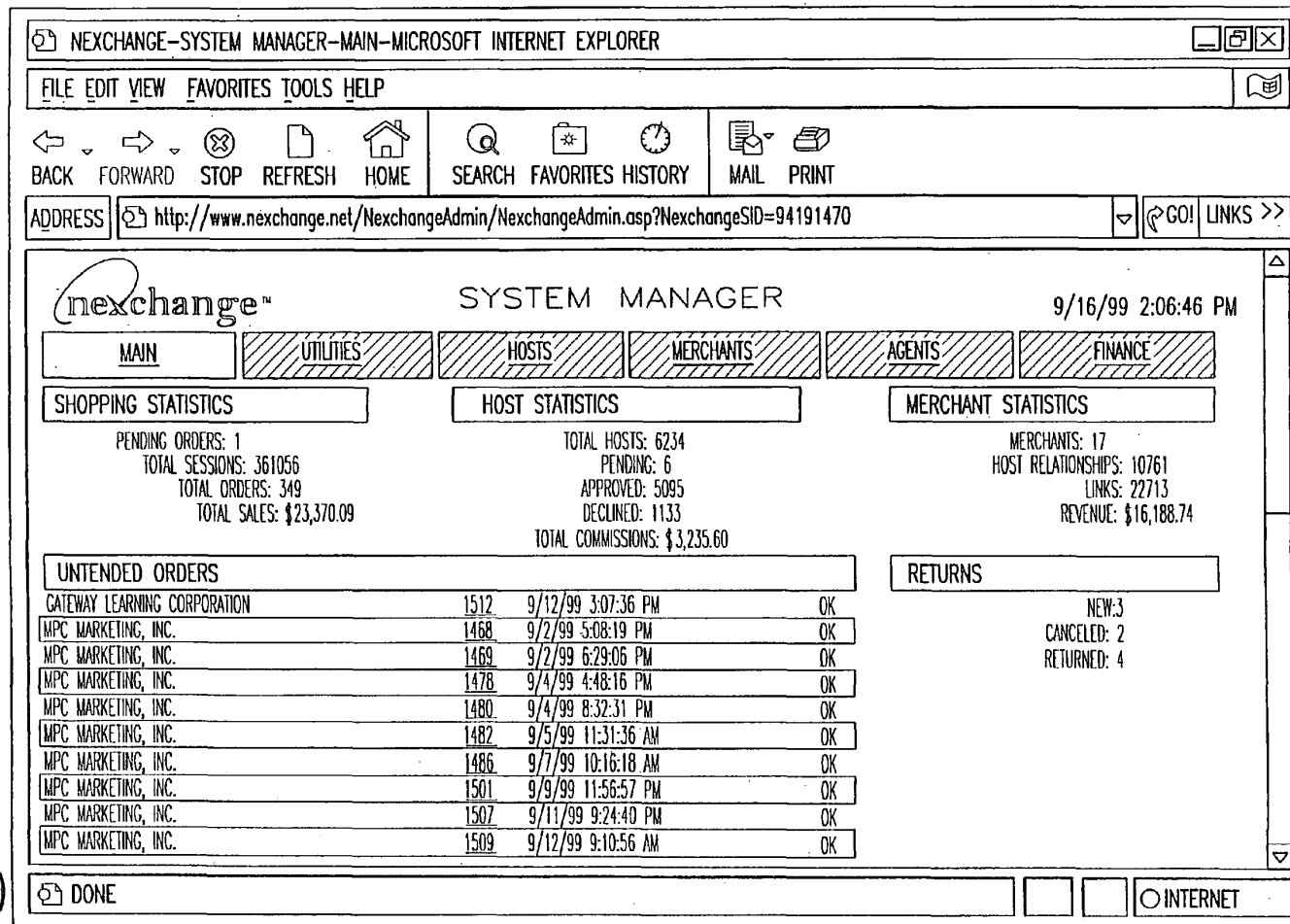


FIG. 20

U.S. Patent

Jan. 31, 2006

Sheet 19 of 24

US 6,993,572 B2

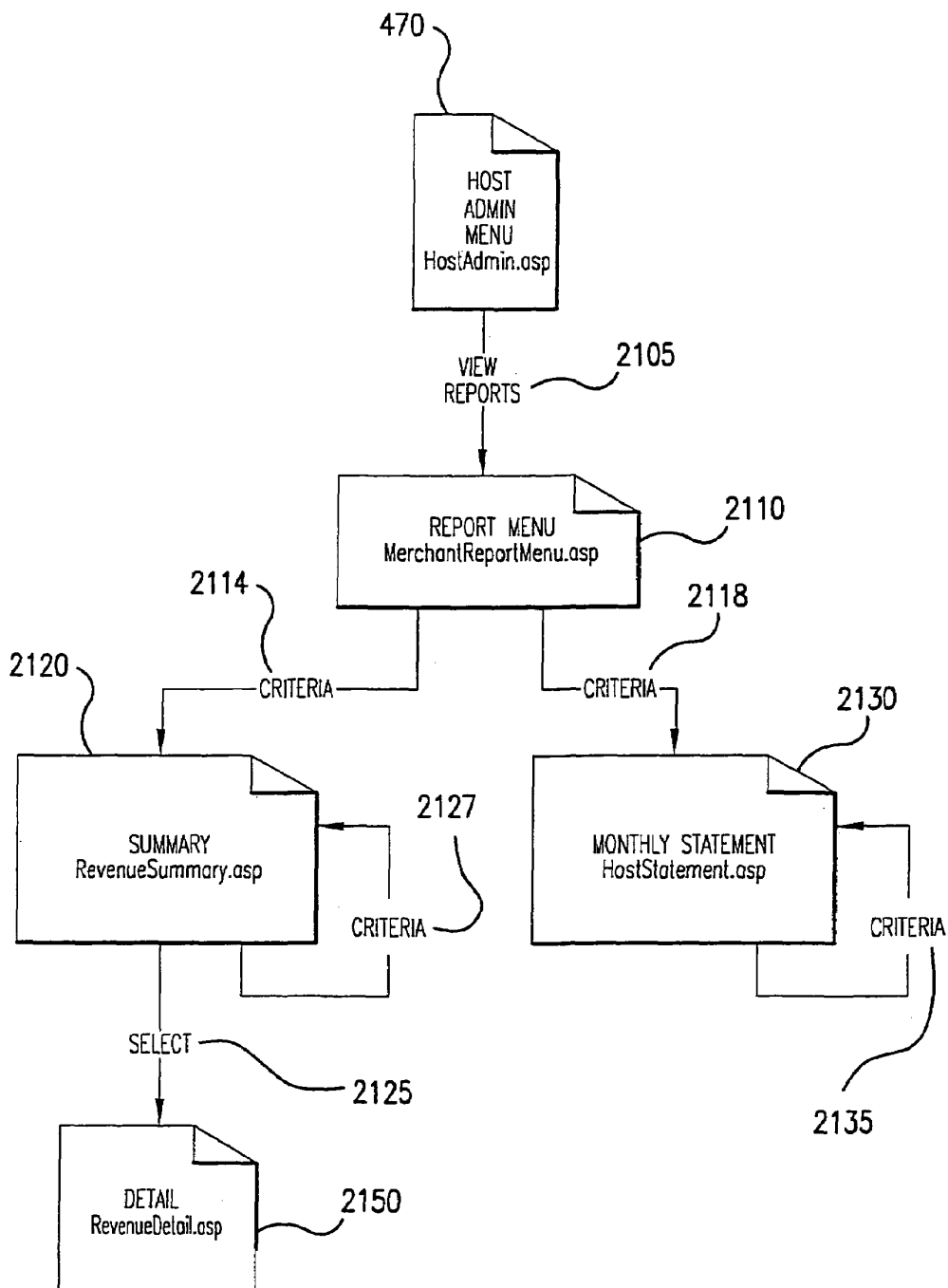
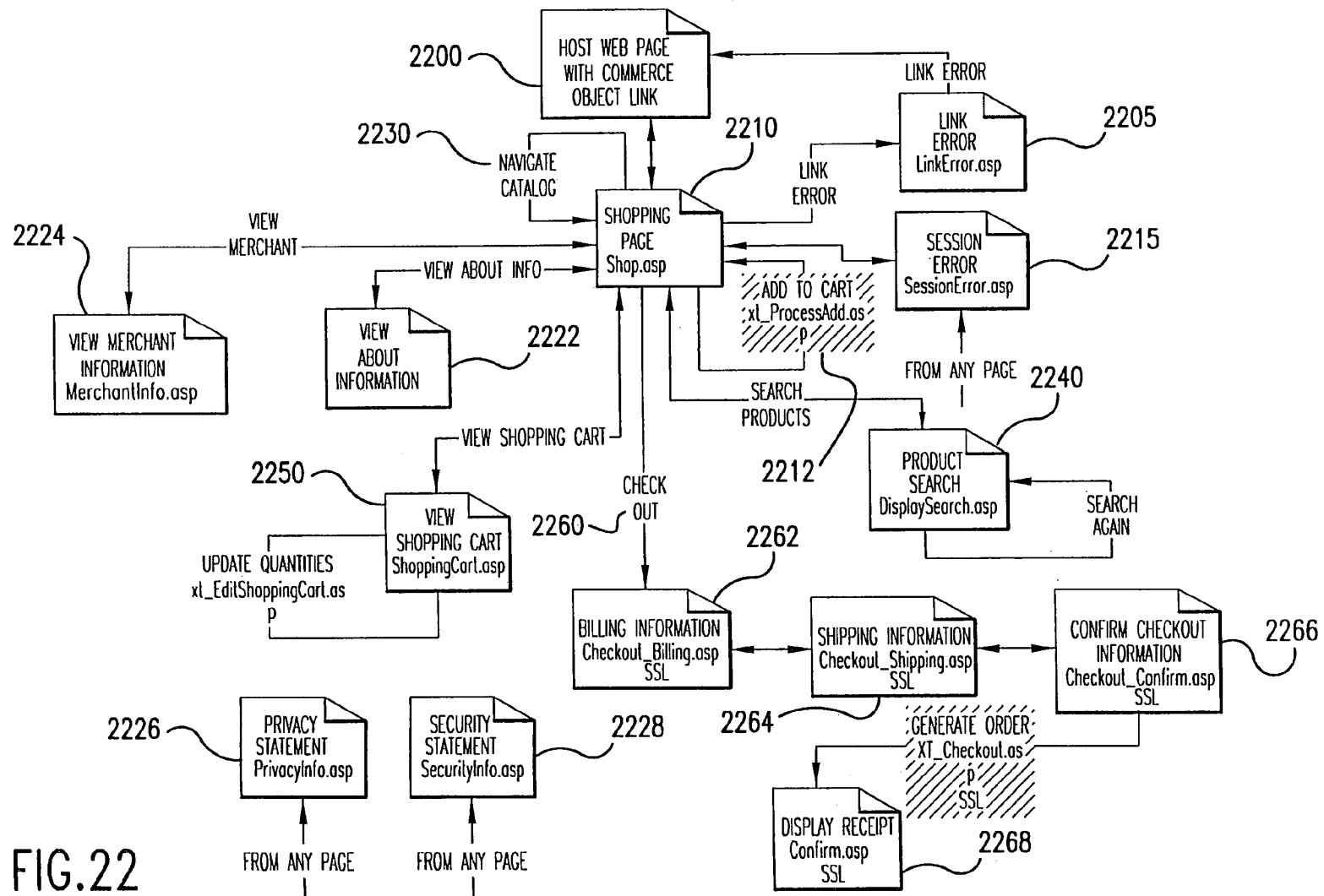
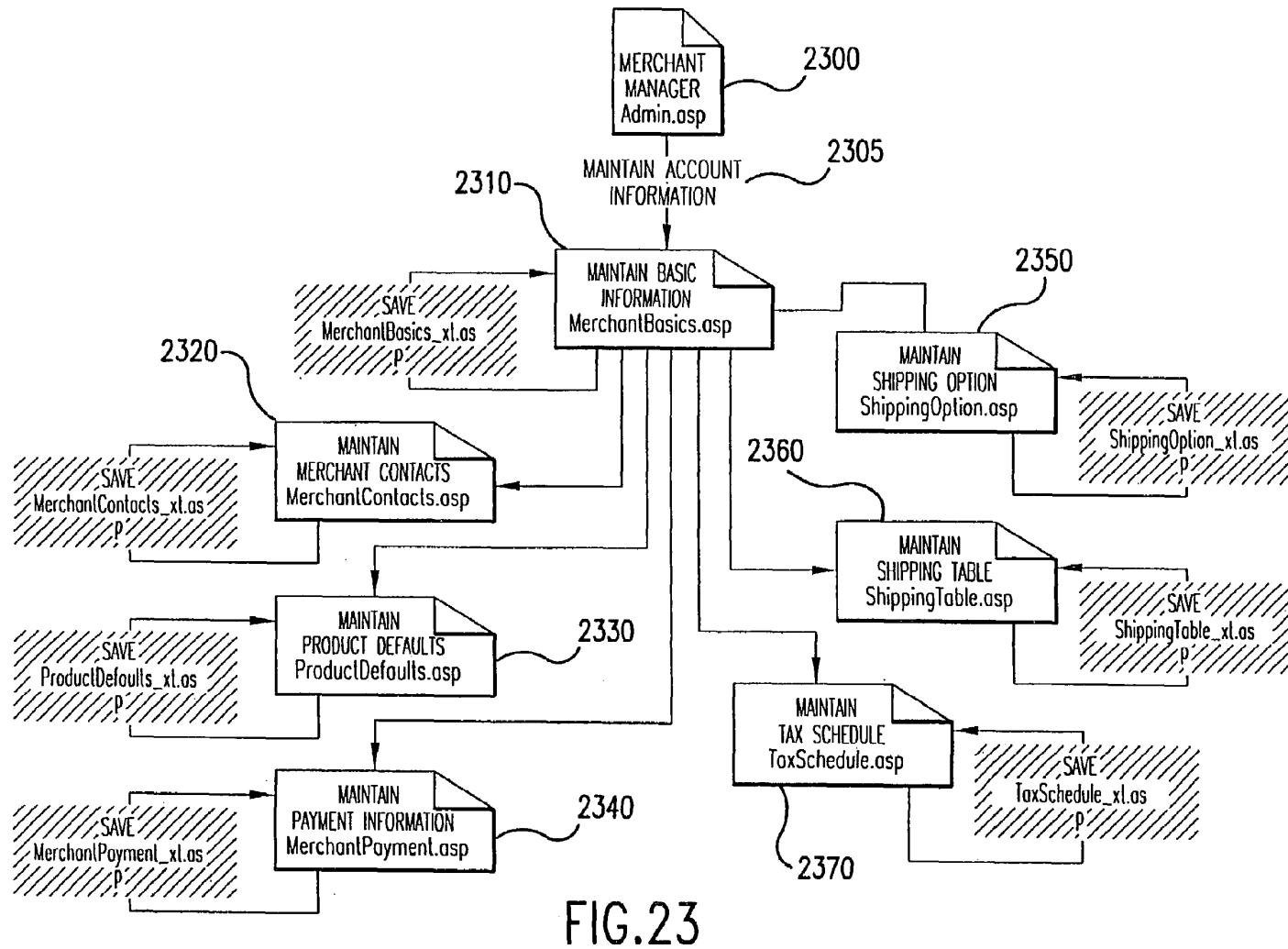
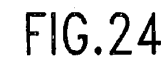


FIG. 21







U.S. Patent

Jan. 31, 2006

Sheet 23 of 24

US 6,993,572 B2

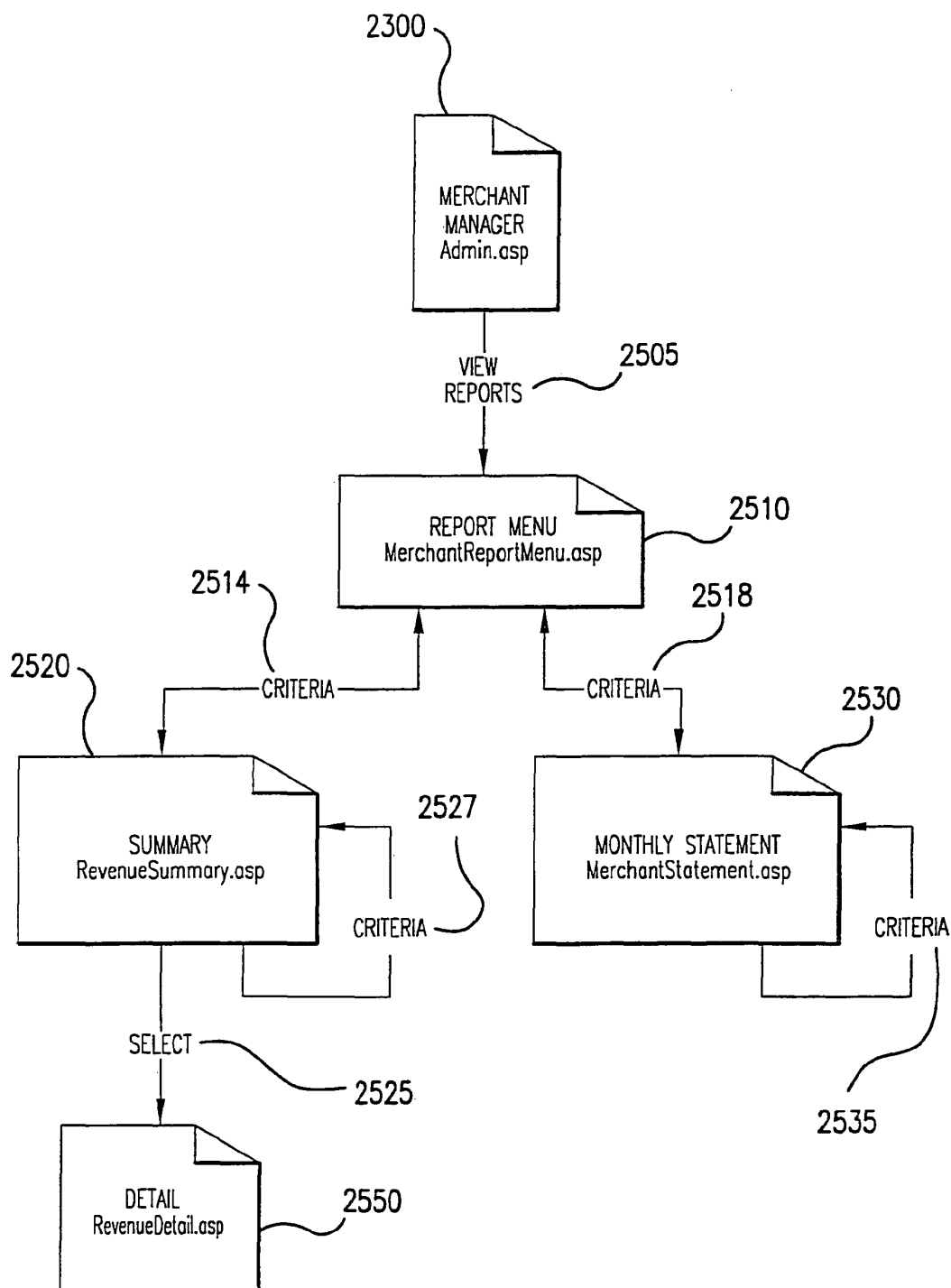


FIG. 25

U.S. Patent

Jan. 31, 2006

Sheet 24 of 24

US 6,993,572 B2

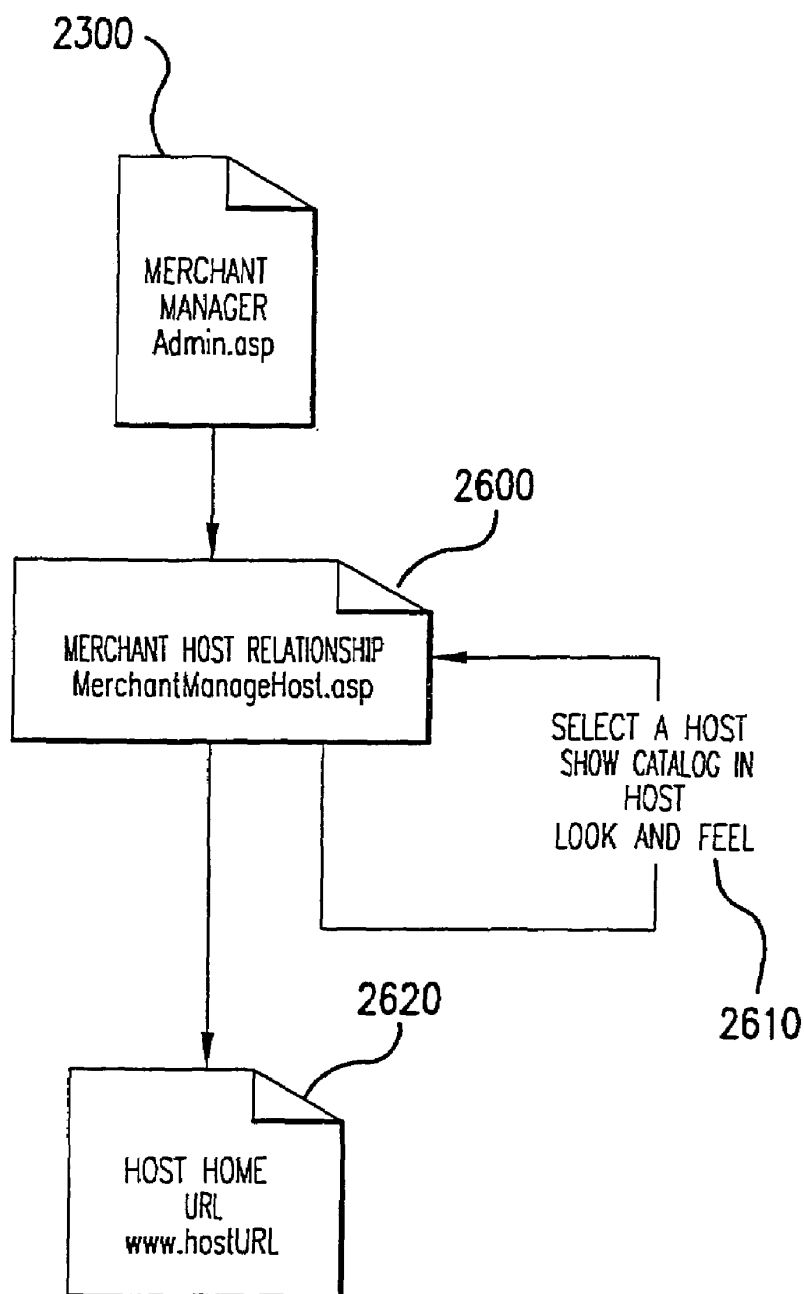


FIG.26

US 6,993,572 B2

3

Internet presence. By using the present invention as their primary online sales channel, these Merchants can focus on product development, production, and order fulfillment and leave the exploration of the Internet to experts. The resulting ongoing cost savings and operational efficiencies magnify the potential benefits of the Internet while reducing the initial costs.

According to the present invention the look and feel of each participating Host is captured and stored. Hosts may include links to selected products or product categories within pages residing on the Hosts' website. Upon actuation of such a link by a visitor of the Host website, a page is presented to the visitor incorporating a replica of the Host's look and feel directed to the sale of the selected products or product categories.

The look and feel of a host is captured and stored by receiving an identification of an example page of a target host. The identified page is retrieved. The look and feel elements of the page are identified, and these elements are stored for future use in generating outsourced transparent pages, pages served by a server other than the host but with the host's look and feel. Such pages give the viewer of the page the impression that she is viewing pages served by the host.

The links included by the host directed to the outsource provider need not be statically linked to a particular product or product category. Such links may direct the outsource provider to dynamically select content to serve within the host's look and feel. This content may be selected based upon a contextual analysis of the page which includes the link. Further, the dynamic content need not be limited to products or product categories but may include any content within the system's data store that is amenable to contextual correlation with content in the page containing the link.

A cost effective, scalable architecture may be used to serve dynamically constructed pages such as those served by the e-commerce outsource provider. This architecture includes three levels: a Web server layer, an application server layer and a database server layer.

The Web server layer provides a front end presentation layer for interacting with end users. This layer may consist of one or more interchangeable low cost server systems. Any request from an end user may be fielded by any system within the layer. The selected system can contact any application server within the application layer to provide processed data for use in responding to the end user request.

The application layer supports interacting with the database server level to acquire needed data and processing it prior to presentation by the Web server layer. As with the Web server layer, this layer may consist of one or more interchangeable low cost server systems. Any Web server system may submit a request to any application server. The application server includes processing functionality suitable for the types of pages to be dynamically constructed.

The database server layer supports low level management of data used in dynamic page construction. The data store across the one or more low cost server systems is seamlessly viewed as an integrated whole. As a consequence, any database server within the layer can field any request for data submitted by an application server.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a typical hardware architecture implementing the present invention.

FIG. 2 illustrates the software architecture of the Web server layer.

4

FIG. 3 illustrates the software architecture of the application server layer.

FIG. 4 is a flow chart of the pages and procedures in the host signup process.

FIG. 5 is a flow chart of the pages and procedures in the host account information maintenance process.

FIG. 6 is a flow chart of the pages and procedures in the host look and fee capture process.

FIG. 7 is a flow chart of the pages and procedures in the host link generation process.

FIG. 8 is a flow chart of the dynamic content selection and presentation process.

FIG. 9 is a screen capture of a Merchant Manager page in a preferred embodiment.

FIG. 10 is a screen capture of a Host Manager page in a preferred embodiment.

FIGS. 11–18 are screen captures of the page in a preferred embodiment of a look and feel capture process.

FIG. 19 is a screen capture of a typical e-commerce supported page served in a preferred embodiment.

FIG. 20 is a screen capture of a System Manager page in a preferred embodiment.

FIG. 21 is a flow chart of the pages and procedures in the host view reports process.

FIG. 22 is a flow chart of the pages and procedures in the shopping process.

FIG. 23 is a flow chart of the pages and procedures in the merchant account maintenance process.

FIG. 24 is a flow chart of the pages and procedures in the merchant catalog maintenance process.

FIG. 25 is a flow chart of the pages and procedures in the merchant view reports process.

FIG. 26 is a flow chart of the pages and procedures in the merchant view hosts process.

DETAILED DESCRIPTION OF THE INVENTION

A preferred embodiment of the invention is now described in detail. Referring to the drawings, like numbers indicate like parts throughout the views. As used in the description herein and throughout the claims that follow, the meaning of “a,” “an,” and “the” includes plural reference unless the context clearly dictates otherwise. Also, as used in the description herein and throughout the claims that follow, the meaning of “in” includes “in” and “on” unless the context clearly dictates otherwise.

A typical embodiment of the present invention will include a data store including a look and feel description associated with a host website, a communications link to a visitor computer, and a processor. The processor performs the tasks of capturing a look and feel description associated with a host website, storing the captured look and feel description in the data store, providing the host website with a link that link correlates the host website with a commerce object for inclusion within a page on the host website and which, when activated, causes the processor to serve an e-commerce supported page via the communication link with a look and feel corresponding to the captured look and feel description of the host website associated with the provided link and with content based on the commerce object associated with the provided link. The Internet serves as the communication link to visitor computers.

In a preferred embodiment as exhibited by FIG. 1, the duties of the processor are split among several computer systems **120a-120c**, **125a-125d**, **130a-130b**. The data store may be implemented through a database system **130a-130b**.

US 6,993,572 B2

5

135a–135d. The Internet **110** serves as the communication link to visitor computers **105a–105f**. In this preferred embodiment, the system utilizes multiple inexpensive computer systems at every level of the architecture. Routing between levels will automatically distribute the load amongst the functioning computers. Increasing throughput becomes a matter of adding more computers, not scaling up the existing ones. This arrangement also provides fault tolerance since the failure of one server will not incapacitate the system as long as another server providing the same service is alive. This approach also permits the distribution of servers geographically. A router **115** may also provide further load balancing.

The tasks performed by the processor may utilize a variety of underlying software technology. In a preferred embodiment, the software architecture can be divided into 3 tiers: web server, application-server and database-server. Each tier is comprised of a number of software layers.

Web Server Tier

The Web Server tier accesses application functionality by calling a single “Request” Application Programming Interface (API). The API will take a Document Object Model (DOM) (as specified by W3C in <http://www.w3.org/TR/REC-DOM-Level-1>, which is expressly incorporated herein by reference in its entirety) object as a parameter and return a DOM object as the response. The request will be relayed to the application server tier where a dispatching method will unpack the request object, inspect it, invoke the desired method, and send back the response object. This approach means that new functionality becomes available as soon as the application server is upgraded. It is not necessary to develop a set of “stubs” that mirror the new API call. This is a major advantage because new functionality in the application tier can be exploited immediately simply by modifying the Active Server Page (ASP) scripts. No web server resident Dynamic Link Libraries (DLLs) need to be upgraded so the server does not need to be shut down. The web server tier will typically run on server computers **120a–120c** having a multitasking operating system such as Windows NT from Microsoft or other suitable operating system software. The Web Server tier contains the following layers as illustrated in FIG. 2:

Web Server Software 210. In a preferred embodiment, IIS by Microsoft is the server software. It supports serving side scripting using the VBScript scripting language.

ASP Scripts 220. All HTML content is rendered by ASP server scripts. The ASP scripting environment can interact with software modules written to Microsoft’s COM specification.

COM Adapters 230. A set of COM wrappers provides the bridge between the ASP scripts and other elements of the system. The wrappers provide the necessary data conversions but do not contain any substantial functionality. The wrappers are not application specific.

API Client Layer 240. The API Client Layer consists of the very thin “request” API described above. This layer cooperates with the Object Cache layer. For example, before retrieving a catalog from the application layer, this layer may check to see if the requested catalog is already in the object cache.

Object Cache 250. The object cache contains the responses to previously submitted requests. All items in the cache are marked with an expiration time that is set at the time they are originally retrieved. The purpose of this layer is to reduce the load on the application tier.

6

Remote Procedure Call Client 260. The Remote Procedure Call Client provides connectivity to the application tier. It also provides request routing. In the event of application server failure, this client will automatically reconnect to a working server. This piece of software is not application dependent. In a preferred embodiment, the DBMS Component Server Client is the Objectstore Component Server Client (OCSC).

In a preferred embodiment, the Web server layer supports the following four Web interface modules. In a preferred embodiment, these modules are encoded with ASP to generate appropriate HTML and Javascript. The four modules are as follows:

1. Merchant Manager

The Merchant Manager is the “Control Center” for Merchants. This module allows the merchant to maintain their products, catalogs, contact information, track orders, process returns, run reports, etc.

A merchant representative must login before performing any system activities. Any valid merchant user will be able to perform all possible actions on the merchant to which it is related. Only registered merchants will have a valid account. An account for a merchant is established when the merchant registers with the system. A merchant representative may initiate registration via a web interface. The signup process must collect basic merchant information, including the information necessary to pay the merchant, and a password, which will be used to create a user account for the merchant. Once the merchant is approved (this may be automatic), the merchant will be sent an email containing a unique user id which can be used to login to the system.

When a representative logs in, she is taken directly to the Merchant Manager as seen in FIG. 9 and assigned a Merchant Session ID (Merchant SID). All pages within the merchant system must retrieve the MerchantSID from the HTTP request and validate it. If the session does not validate, the representative is taken back to the Login screen.

This module contains the following submodules:

Account Information

A merchant representative will be able to maintain the basic merchant profile, which includes the information needed to pay the merchant, the merchant’s password, and the merchant’s shipping policy information. FIG. 23 depicts the pages and procedures in a typical merchant account maintenance process. The representative selects to maintain account information **2305** from the Merchant Manager page **2300** leading to the display of the a basic information modification page **2310**. Each modifiable information type could be altered through a designated page available through the basic information page **2310**. Each such page could provide functionality to save any changes made to the particular page.

This sub-module allows a merchant to maintain the following types of information:

Basic information 2310—name, description, address, logo

Contacts 2320—for admin, finance, returns, support, order notification

Product Defaults 2330—price labels, unit of weight, display options

Payment Info 2340—check or ACH, payee info, bank info

Shipping Option 2350—by price, items, weight, other or NA

Shipping Table 2360—maintain shipping methods and prices

US 6,993,572 B2

7

Tax Schedule **2370**—set tax rate for states in which taxes are collected. This may be automated in the future.

Products and Catalogs

Here the merchant can both maintain products and arrange them into catalogs. Example product attributes include:

- name
- description
- attributes—such as size, color, etc.
- price(s)—normal, sale, competitor's and the price can be set or changed by an attribute
- small image—used in most places
- large image—used for zoom-in in shopping

The merchant can also maintain their catalogs and categories. A catalog is the top level category. A merchant can have one or more catalogs. Each catalog will be presented to Hosts as a separate entity. However, it is still tied back to the merchant. The merchant logo can be assigned to the catalog or a different image selected.

A catalog is considered a commerce object. Further, a catalog is populated with product or product category commerce objects. An indicator for dynamic selection of a product or product category may also be considered a commerce objects; however, such objects would not appear in a catalog.

Categories are then placed in the catalog(s). Categories can also be placed into other categories. A catalog or category can contain an infinite number of categories but really should be kept to less than 10 at any given level for presentation purposes. The bottom level categories contain products. The product node is actually a pointer to the product in the inventory table. This allows for a product to be placed into multiple categories.

A catalog, category or a product can be set to be inactive. If it is set as inactive, it will not be available to the hosts to browse or sell. It will also not be available to customers in the shopping area. If a catalog or category is set as inactive, then every item beneath it (categories or products) is also inactive.

A product also has a flag to indicate it is out of stock. When a product is no longer going to be sold by the merchant, it should be set to inactive. If the product is simply out of stock, thus temporarily unavailable, the out of stock flag should be used.

If a host has an existing link that points to an inactive or out of stock product or an inactive catalog or category, the customer will be taken to the first level above that is active. For example, if a customer clicks on a Link that points to coffee pot A, and coffee pot A has been set to inactive, the shopping page will display the entire coffee pot category (all the active coffee pots). If the coffee pot category was set to inactive, then the shopping page would go to the next level up (such as Kitchen Appliances). In this case the shopper will be given a message indicating the selected product or category is not available. If a host has a link associated with a dynamic selection indicator commerce object, the triggering of such a link will cause the dynamic selection of a product or product category.

FIG. 24 depicts pages and procedures used in a merchant catalog and product maintenance process. When a merchant representative logs into the system, she is presented with the merchant manager page **2300**. From this page, she may choose to proceed to the edit products and catalogs page **2400**. On this page, she may elect to search for a product through entering criteria **2405**. She may elect to preview a

8

particular product **2410** and, from the preview, view additional information associated with the particular product **2415**.

From the edit products and catalogs page **2400**, she may also choose to edit a particular product **2420** or edit by catalog or category **2442**. In editing a particular product **2420**, she may elect to save the information associated with the product **2422**, select a current attribute to edit **2424** leading to the attribute edit page **2430** or create a new attribute associated with the product **2426**. An attribute includes a collection of options such as sizes or colors. If she selects to add a new attribute **2426**, a new attribute creation page is presented **2428**. Upon creation of the new attribute, the new attribute is saved, and the representative proceeds to the attribute edit page **2430**. From this page, she may choose to save or cancel the current attribute edit **2435**.

If the representative chooses to edit by catalog or category **2442**, she is presented a page allowing selection of catalogs or categories **2440** through navigating the catalog/category hierarchies **2444**. Once a particular catalog or category is identified, she may edit it via a catalog/category edit page **2450**. After editing, the alterations are saved **2455** returning her to the catalog or category selection page **2440**.

Reports

A merchant representative may request on-demand reports. Such reports include an account statement that details all payments to the merchant, and statistics about catalog visits and sales. Statistics can be correlated to hosts, links, products and time periods.

As illustrated in FIG. 25, a merchant representative begins at the Merchant Manager page **2300**. She selects the view reports option **2505** to view the report menu page **2510**. From the reports menu page **2510**, she may enter criteria **2514**, **2518** leading respectively to a revenue summary page **2520** or a monthly statement page **2530**. From the monthly statement page **2530**, she may change criteria **2535** to view a revised monthly statement **2530** or return to the report menu **2510**. From the revenue summary page **2520**, she may select a specific item **2525** for receiving a detailed revenue page **2550**, alter the criteria **2527** to receive a revised revenue summary **2520**, or return to the reports menu page **2510**. From the detailed revenue page **2550**, she may return to the revenue summary page **2520**.

The following reports are available for the merchants to track their results:

Revenue Summary by Month

This report provides sales and traffic information summarized by month. Data includes number of sessions, number of orders, gross and net sales, etc. Summarizes at the month level and allows 'Drill Down' to daily information.

Revenue Summary by Host

This report provides sales and traffic information summarized by host. Data includes number of sessions, number of orders, gross and net sales, etc.

Revenue Summary by Product

This report provides sales and traffic information summarized by Product. Data includes number of sessions, quantity in shopping cart and gross order amount.

All reports can be run as quick reports (this month, last month, this year, last year, all sales) or by inputting a specific date range.

Order Tracking

A merchant representative can access a web interface that allows her to report the status of orders. This includes:

reporting when the order was shipped, along with tracking information, and the status of all returned items.

The order tracking sub-module allows the merchant to manage all areas of an order. An order can have the following status:

- new—the order has been received and credit card information validated
- pending—the merchant has acknowledged the order, it is waiting to be shipped
- shipped—the merchant has shipped the order

An order can be shipped in multiple shipments. The merchant is credited for sales on shipped items.

The customer may also return part of an order or the entire order. The customer will obtain an RMA number (see the Shopping sub-module). All the merchant needs to do is acknowledge they have received the product back from the customer.

Review Hosts

The Merchant Manager also allows the merchant to review which hosts have built links to that merchant's products. The merchant can also view the host web page containing such links.

A merchant representative will be able to review the list of hosts with which the merchant has a relationship. The merchant will have access to some basic information about the host, including at least one of the host's links, so that the host's look and feel can be evaluated.

In a preferred embodiment, a representative may review hosts through pages and procedures as depicted in FIG. 26. She begins at the Merchant Manager page 2300. She selects the review hosts option to view the merchant-host relationship page 2600. From this page, she may elect to view one of her products in the host's look and feel 2610 or view a list of links with the selected host that are directed to her commerce objects 2620.

Automated interfaces can be introduced for merchants wishing to integrate their business systems with the func-

placed, and send order status updates back via automated interfaces. This integration is accomplished through the establishment and use of a standardized communication protocol.

In a preferred embodiment, merchants integrate by exchanging specially formatted XML documents over secure HTTP connections (i.e. HTTP over SSL). If the request is a query, the HTTP response will contain an XML document with the query results. Likewise, if the request is a command, the response will be an XML document containing the success or failure of the command.

Automated requests and responses are XML documents as described by the W3C's XML 1.0 specification, which may be found at <http://www.w3.org/TR/REC-xml> and which is expressly incorporated herein by reference in its entirety. The XML specification only describes the syntax of an XML document, it does not place any restrictions on the content of the document. The content of requests and responses is described using a formal notation known as DCD (for Document Content Description). DCD's are described in a note that was submitted to the W3C by Microsoft and IBM. The DCD note can be viewed online at: <http://www.w3.org/TR/NOTE-dcd> and which is expressly incorporated herein by reference in its entirety. A specific DCD describes the format of a request or response in the same way that the SMTP specification describes the format of an email. Typical DCDs for Automated Interfaces may be accessed at the following URLs: <http://automation.nexchange.net/dcd/ManageInventory.01.02.dcd.xml> and <http://automation.nexchange.net/dcd/ManageCatalog.01.02.dcd.xml>, both documents are expressly incorporated herein by reference in their entirety.

All interfaces have the same basic structure. The table below illustrates the basic structure of Automated Interface requests and responses.

		<hr/>		<ManageOrders specification='http://www.nexchange.net/automated/xml/ManageOrders. 01.01.dcd'>	
HEADER	Response			<RequestHeader>	
				<Authentication username='xxx' password='xxx' scope='xxx' >	
BODY	Query	query		<Instructions OnFail='HALT'/>	
				<Receipt Processor='xxx' Date='xxx' Number='xxx'/>	
				<ResponseSummary Status='SUCCESS'>	
	Operation			Error Message Here	
				</ResponseSummary>	
				</RequestHeader>	
	Query	query		<RequestBody>	
				<Command status='SUCCESS'>	
				<QueryNewOrders />	
	Operation			<QueryNewOrdersResponse>	
				Query Results Here	
				</QueryNewOrdersResponse>	
	Operation			</Command>	
				<Command status='SUCCESS'>	
				<AcknowledgeOrder order_id='xxx' item_price_total='xxx'/>	
				</Command>	
		</RequestBody>		</ManageOrders>	
		<hr/>			

tionality supported by the present inventions. Merchants can update their online catalogs, retrieve information on orders

All responses contain the original request with status information and query results appended. The table above

shows a response to a Manage Orders request. The response is divided into a header and a body section (“Request-Header” & “RequestBody” respectively).

The RequestHeader element contains authentication information and global instructions. When the request is returned, the request header will also contain a receipt and a response summary. The authentication element carries the information needed to identify and authenticate the requesting party. The global instruction element contains instruction on how the request is to processed if an error is received. The remainder of the commands in the request can be processed or the request can be discontinued. In a response, the receipt element is added to the request header. Information in the receipt can be used to recover the response. The response summary element contains a status code, which will be set to “SUCCESS” if all commands were completed successfully.

The RequestBody element contains one or more command elements. The exact content of a command element depends on the interface being used. When a command is submitted, its status attribute will always be “REQUESTED”. When the command has been processed, the response will echo back the command with the status changed to “SUCCESS”, “FAILURE” or “SKIP”. In the case of a query command, the response will contain a query response in addition to the status.

If the request conforms to the DCD, the response will contain the original request with the status and query results embedded. The command status codes must be inspected to determine what has been done.

If the request did not conform to the specification, two possible error types can occur:

- XML Parsing Error
- DCD Validating Error

Errors are returned as NexError node. If a NexError is returned, the XML document has not been processed. The returned XML should always be examined for a NexError.

If the request document is not valid XML, an XML Parsing Error will be returned. A NexError node will be added around the entire document. It will look similar to the following:

```
<NexError Msg=" XML Parsing Error" ... >
  <XMLParseError errorcode=" " reason=" " line=" "
linepos=" " >
    offending section of document
  </XMLParseError>
</NexError>
```

The errorcode, reason, line and linepos will contain information explaining what the error is and the location in the file.

If the request document is valid XML but does not match the published Interface DCD, a DCD Validating Error will be returned. A NexError node will be added around the entire document. A DCDError node will be embedded in the document at the location of the error. It will look similar to the following:

```
<NexError Msg=" XML Validating Error" ... >
  <XMLValidateError msg="Find the DCDError Node in the
document for detailed error information."/ >
    ... Valid Portion of document ...
  <DCDError message=" " >
```

-continued

```
offending section of document
</DCDError>
... Valid Portion of document ...
</ XMLValidateError >
</NexError>
```

The following is an example request attempt to add one new product and to update the price of an existing product.

```
<ManageInventory
specification='http://automation.nexchange.net/dcd/Manage
Inventory:01.02.dcd.xml' >
  <RequestHeader>
    <Authentication username='xxxxx'
password='xxxx' scope='MNNN' />
    <Instructions onfail='CONTINUE' />
  </RequestHeader>
  <RequestBody>
    <Command status='REQUESTED'>
      <AddProductDef updateifexists='1' >
        <ProductDef
id='saw'
skumask='saw'
name='saw'
description='A Circular Saw From Festo'
shortdescription='Festo Circular Saw'
info='no comment'
image='http://216.0.58.242/rmttools/fw132saw.jpg'
largeimage='http://216.0.58.242/rmttools/fw132saw.jpg'
usualprice='145.00'
saleprice='135.00'
compareprice='215.00'
salelabel='HOT PRICE'
instock='1'
commplan='default'
>
        <AttributeDefList/>
        <KeywordList/>
      </ProductDef>
    </AddProductDef>
  </Command>
  <Command status='REQUESTED'>
    <UpdateProductDef
id='saw'
image='http://216.0.58.242/rmttools/fw132saw.jpg'
/>
  </Command>
</RequestBody>
</ManageInventory>
```

2. Host Manager

The Host Manager is the “Control Center” for Hosts. Here, a Host can track sales, design their store front, generate links to merchant products, get traffic/order reports, update account information, etc.

For a host to gain access to the host manager system, the host must be registered. FIG. 4 depicts a flow chart for a typical registration process. A host representative may initiate contact 410 with the system via a web interface. The signup process must collect basic host information 420, including the information necessary to pay the host a commission for purchases through his site, which is saved by the system 430. Optionally, a click agreement containing terms of use 440 may be presented requiring agreement 444 to proceed. If at some point the representative elects to cancel 425, 458 or reject the use agreement 448, he or she is returned to her point of entry 410. The system may then request the representative to select a user identification and a password 450. If the selected user identification is already in use 454, the representative may be prompted to select a

US 6,993,572 B2

13

user identification **450**. The information associated with the host is stored **460**, and the representative may proceed to the host manager system page **470**.

When a host logs in, they are taken directly to the Host Manager, as seen in FIG. **10**, and assigned a Host Session ID (Host SID). All pages within the host system must request the Host Sid and call the ValidateHostSessionID function. If the session does not validate, the user is taken back to the Login screen.

This module contains the following submodules:

Account Information

This sub-module allows a host to maintain the following types of information:

Administrative Contact—name, address, phone

Payee Contact—name, address, phone, SSN

Site Information—site name, URL, description

Site Demographics—# of visitors, type of visitors, comments

A host representative will be able to maintain basic host information, including the information needed to pay the host, and the host's password. FIG. **5** depicts a flow chart of the pages and actions in a typical maintenance process.

The Host Manager is the "Control Center" for Hosts. Here, a Host can track sales, design their store front, generate links to merchant products, get traffic/order reports, update account information, etc

For a host to gain access to the host manager system, the host must be registered. FIG. **4** depicts a flow chart for a typical registration process. A host representative may initiate contact **410** with the system via a web interface. The signup process must collect basic host information **420**, including the information necessary to pay the host a commission for purchases through his site, which is saved by the system **430**. Optionally, a click agreement containing terms of use **440** may be presented requiring agreement **444** to proceed. If at some point the representative elects to cancel **425**, **458** or reject the use agreement **448**, he or she is returned to her point of entry **410**. The system may then request the representative to select a user identification and a password **450**. If the selected user identification is already in use **454**, the representative may be prompted to select a user identification **450**. The information associated with the host is stored **460**, and the representative may proceed to the host manager system page **470**.

When a host logs in, they are taken directly to the Host Manager, as seen in FIG. **10**, and assigned a Host Session ID (Host SID). All pages within the host system must request the Host Sid and call the ValidateHostSessionID function. If the session does not validate, the user is taken back to the Login screen.

This module contains the following submodules:

Account Information

This sub-module allows a host to maintain the following types of information:

Administrative Contact—name, address, phone

Payee Contact—name, address, phone, SSN

Site Information—site name, URL, description

Site Demographics—# of visitors, type of visitors, comments

A host representative will be able to maintain basic host information, including the information needed to pay the host, and the host's password. FIG. **5** depicts a flow chart of the pages and actions in a typical maintenance process. The representative has previously logged into the system to reach the host manager system page **470**. From the host manager system, the representative selects to update her account **510** leading to a host information maintenance page **520**. The

14

representative can modify host information and, then choose to save or cancel the modification **530**. In either case, the representative is returned to the host manger system page **470**.

Store Front Design

The store front design is where the host's look and feel is captured. The look and feel is captured by selecting an example page the host, retrieving the sample page from the host, identifying the look and feel elements from the sample page and saving the identified look and feel elements. "Look and feel elements" include logos, colors, page layout, navigation systems, frames, 'mouse-over' effects, or other elements that are consistent through some or all of a Host's website. A typical system for accomplishing this task would include a data store for storing look and feel descriptions, a communication channel to the host whose look and feel is to be captured and a processor for executing the capture.

When a customer clicks on a host buying opportunity (link), the next page loaded will be a shopping page. However, this shopping page should retain the host's look and feel. This is accomplished by capturing the HTML text and images that comprise their look and feel and embed within it the shopping HTML content. Any relative URLs in the host look and feel may be changed to absolute URLs back to the host system.

In a preferred embodiment, there are five steps to a process capturing the host's look and feel, converting relative URLs to absolute URLs and validation of links.

A host representative will be able to capture host look and feel information and to update host look and feel information through recapture. FIG. **6** depicts a flow chart of the pages and actions in a typical look and feel capture process. The representative has previously logged into the system to reach the host manager system page **470**. From this page, the representative selects to initiate host look and feel capture through a design storefront wizard **605**. An introduction page is presented explaining the process **610** from which the representative proceeds in the following manner:

Base URL **615**—the URL used to convert relative links to absolute links, as seen in FIG. **11**.

header **620**—the HTML to be rendered BEFORE the shopping html. Selection may be made by code, as seen in FIG. **12**, by graphical point and click selection or other suitable selection method.

footer **625**—the HTML to be rendered AFTER the shopping html. Selection may be made by code, as seen in FIG. **13**, by graphical point and click selection or other suitable selection method.

preview **630**—shows what the shopping page will look like (nothing has been captured yet). From this preview page **630**, as seen in FIG. **14**, the representative may elect to return to earlier stage to perform a change **635**, **640** or **645** of base URL, header or footer respectively. The user may also have access to a preview **650** with example content included to demonstrate a typical page with both content and look and feel **680**, as seen in FIG. **15**. From the generic preview page **630**, the representative may choose to continue **655** with finalizing the look and feel **660**.

final check **660**—finalize the captured look and feel, as seen in FIG. **16**, this page may allow validation of links and images and offer to save the captured look and feel. Once validation, if any has been performed, and the look and feel has been saved, the process completes **675**.

16

The code the host embeds on their web site is as follows:

In a more elaborate system, the retrieval process might encompass not only the page containing the link but also other pages linked to the page of link origin. Keywords or word count analysis could be used to determine context based upon the aggregation of pages retrieved. In a further embodiment, differing weights could be given based upon the source of the keyword identified: keywords from the

US 6,993,572 B2

17

page of origin would have a greater weight than keywords derived from pages one link away.

Reports

A valid host representative will have on-demand access to a report showing visits to their links and sales. The report will be scoped by date range. Visits can be summarized by merchant and by link. Sales can be summarized by merchant and by link.

As illustrated in FIG. 21, a host representative begins at the Host Manager page 470. She selects the view reports option 2105 to view the report menu page 2110. From the reports menu page 2110, she may enter criteria 2114, 2118 leading respectively to a revenue summary page 2120 or a monthly statement page 2130. From the monthly statement page 2130, she may change criteria 2135 to view a revised monthly statement 2130 or return to the report menu 2110. From the revenue summary page 2120, she may select a specific item 2125 for receiving a detailed revenue page 2150, alter the criteria 2127 to receive a revised revenue summary 2120, or return to the reports menu page 2110. From the detailed revenue page 2150, she may return to the revenue summary page 2120.

The following reports are available for the hosts to track their results:

Revenue Summary by Month

This report provides sales and traffic information summarized by month. Data includes number of sessions, number of orders, gross and net sales, etc. Allows 'Drill Down' to daily totals.

Revenue Summary by Merchant

This report provides sales and traffic information summarized by merchant. Data includes number of sessions, number of orders, gross and net sales, etc.

Revenue Summary by Link

This report provides sales and traffic information summarized by Link. Data includes number of sessions, number of orders, gross and net sales, etc.

3. Shopping

The shopping module is the part of the application that allows customers to find, search, select and buy a product. There is also a return product section accessible to the customer after the order has been placed.

Shopping is the part of the application that the general public will encounter. FIG. 19 displays a screen capture of a typical shopping page in a preferred embodiment. FIG. 22 depicts pages and procedures in a shopping process as implemented in a preferred embodiment.

The customer was on a host site and saw a link to buy something created via the Link generator **2200**. When he or she clicks on the link, he or she is taken to the shopping page parameterized with the Link ID **2210**. If an error occurs during this transition, the visitor is routed to a link error page **2205**.

A variety of generic information may be available from any shopping page within the system. Such information could include information about the e-commerce outsource provider **2222**, information about the merchant offering the current commerce object **2224**, information about an involved party's privacy policy **2226**, or information about an involved party's security policy **2228**.

Customers will be able to browse a merchant's catalogue and place items in their shopping cart **2212**. When the customer is ready to checkout **2260**, the system will acquire payment information **2262** and shipping information **2264** from the user, confirm this information **2266**, and execute the transaction. The receipt including a URL that can be used

18

to track the order status (e.g.—it could be bookmarked) will be displayed to the customer **2268**. By visiting the URL provided upon checkout from the shopping experience, the customer can check the status of their order, initiate returns, and check on their return status.

This module contains the following submodules:

Session

Each time a new shopping session is started, a customer session is created for the shopper. This Customer Session is assigned a Session ID (SID). All pages within the shopping system must request the SID and call the ValidateSessionID function. At any time if a session error occurs, a session error page **2215** may be presented.

Unlike the merchant and host sessions, the shopping session is persistent. The session information retained is what the customer has placed in the cart and if they have checked out. The SID is also written back to the customers browser as a cookie. If a customer returns to the Shopping page an attempt will be made to use the last session they had.

It will only be reused if the ALL of the following are true:

The host the customer is coming from now is the same host as in the previous session

The merchant for the current link is the same as the merchant in the previous session

The previous session was not “Checked Out”.

The session is not older than a certain age.

Product Search and Selection

The main shopping page begins at the entry point that the host used to build the Link. This can be to a specific product, a category of products, a category of sub-categories, a complete catalog or a dynamically selected destination. However, no matter what entry point was chosen, the customer can navigate to every item contained in the merchant catalog used for the Link serving as the customer's entry point to the shopping. The customer may browse the catalog **2230** or search for a specific product or product category **2240**.

Shopping Cart

The Shopping Cart is the main information saved in a customer session. As a customer places products in the shopping cart, we retain information such as:

- name of the product
- price of the product
- any attributes (size, color, etc)
- host commission rate
- merchant revenue percent

This information must be stored redundantly in the shopping cart because the price, name, etc may change later and the values at the time of purchase need to be retained. The shopping cart interface also allows the shopper to remove a product and/or change the quantity through a view shopping cart page **2250**.

Check Out

The check out process is separated into two distinct pieces.

Order Capture

Credit Validation

Order capture is the process of obtaining the customers billing and shipping information and creating a pending order. The credit card information is checked to make sure it is a valid number for the card type but it is not actually processed with a credit card authorization service (i.e. CyberCash). The order is accepted, assigned an order id and the customer is given an on screen and email confirmation. The pending order has a status of new.

The credit validation process happens sometime after the order capture has occurred. The customer's billing informa-

US 6,993,572 B2

19

tion is sent to the authorization service. The pending order now has the status of authorized.

If the card is validated, the order is accepted and placed into the The order table. The pending order has a status of accepted. If the billing information fails validation, the pending order status is set to rejected and an email is sent to the customer informing that the credit card information could not be validated.

4. System Manager

The System Manager is the “Control Center” for administrators. The administrator can monitor the day-to-day activities and status of the system. When an administrator logs in, he or she is taken directly to the System Manager and assigned a Nexchange Session ID (NexchangeSID). All pages within the System Manager system must request the NexchangeSID and call the `ValidateNexchangeSessionID` function. If the session does not validate, the user is taken back to the Login screen. Access to administration functions will require authentication using the name and password for a valid administration account.

The home/main page of the System Manager provides a quick summary of the current system status; a screen capture of a typical main page in a preferred embodiment is seen in FIG. 20. This summary includes pending orders, orders, host statistics, merchant statistics and an unattended orders list.

An administrator will be able to configure a hosts or merchant's payment policy. This includes specifications for any holdbacks, and a method for calculating commission/payment. At the request of a merchant, an administrator will be able to configure the system to reject all shopping traffic from a particular host-merchant arrangement. The host and merchant contacts will be notified via email. An administrator will also be able to activate or deactivate a host. The system will reject shopping traffic from inactive hosts. When a host's status is changed, the host contact will be notified via email. An administrator will configure the system to enforce system-wide policies. System-wide policies include the number of days allowed for returns.

The system will periodically run an audit process and report on situations of concern. For example, an audit could search for orders that have not been serviced for a certain period of time. The system may also report on possible security situations such as an inordinate number of account lockout incidents.

This module contains the following submodules:

Utilities

The following utilities are available:

- List Pending Orders
- List Orders
- List Rejected Orders
- List Returns

Host

The following actions are available:

- List Promos
- List Hosts
- Maintain Host Tiers
- Host with Pending Merchants

Merchant

The following actions are available:

- List Merchants
- Copy a Category
- Find Category Links
- Add a New Merchant
- Maintain Brands

20

Application Server Tier

The business functionality is provided via “application servers”. An application server will consist of one or more of the business modules, wrapped with an appropriate middleware adapter. This arrangement allows delivery of services via many different mechanisms. For example, if it becomes desirable to serve some functions to a Java client, a Java Remote Method Invocation (RMI) version of an application server could be built. The new server could be developed rapidly because only an RMI “wrapper” would need to be developed, while the application logic would be reused. In a preferred embodiment, this layer consists of a set of core C++ software modules that encapsulate business functions.

The Application Server tier may run on one or more application server computers. The application servers are stateless. This means that, for two application servers serving the same functionality, “one is as good as another”. In the event of failure, a client’s requests may be handled by different server than before the failure. Since it does not matter which server services a request, routing is greatly simplified. The stateless server approach also provides excellent fault tolerance since all application servers can back each other up. Use of a combination of “sticky routing” and caching to significantly ameliorate any detrimental performance implications of the stateless approach, while preserving most of the benefit. Once a client begins using a particular service, the system will show a preference for routing future requests from that client to the same server. The servers maintain a cache recently used data and will only access the database if the desired item cannot be used in cache. Since the routing is sticky, the client’s data will often be in cache, and in many cases, no database access will be required. Should the client be routed to a new server, the session data can be retrieved from the database as occurs in the “vanilla” stateless model. In a preferred embodiment, the functionality of this layer utilizes one or more low cost server systems 125a–125d running a suitable operating system such as Microsoft Windows NT. This tier is also composed of several software layers as illustrated in FIG. 3:

Remote Procedure Call Server **310**. This software provides connectivity to the Web Server layer and is not application dependent. In a preferred embodiment, this software layer is the Objectstore Component Server.

Application Logic 320. This software encapsulates the business functionality. The design of this software layer and the various application servers is more fully described below.

Virtual Database 330. The virtual database layer allows the application data to be distributed across multiple Database servers while insulating the application layer from the physical storage configuration. The virtual database contains a table that maps object types to physical databases. All database objects or records of a given type are distributed across the permissible databases. Databases can be added while the system is live to permit expansion onto new servers. Overburdened databases can be closed to prevent assignment of new data to them. Databases can be moved to different physical servers. All stored objects are referenced by a handle which is unaffected by the physical location of the referenced data. The virtual database layer also permits a collection of objects distributed across multiple servers to be indexed and searched.

DBMS Client 340. This software provides access to data stored in the databases. In a preferred embodiment, the DBMS client is Object Design's Objectstore client. All

US 6,993,572 B2

21

Objectstore clients contain a cache of recently used database pages. An optimistic locking scheme is used to ensure cache consistency. The caching scheme is very effective in the present invention because it is optimized for many readers and few writers. In a preferred embodiment, the application server layer includes the following eight application servers:

1. Cashier—Collects checkout information: billing info, shipping preferences, etc.

The Cashier server is analogous to a cashier in a “bricks and mortar” store. The cashier’s responsibilities are listed below:

Collecting Information Necessary To Complete a Sale.

This information will include billing information, shipping address(s), and preferred shipping methods. In some cases, the information to be collected may depend on the contents of the order. The cashier will also access the appropriate merchant policy information to assist in determining what data should be collected.

Providing an Itemized Account of the Total. Upon receiving the necessary data, the cashier will compute the applicable taxes, shipping charges, etc., and provide an itemized account of the order total.

Execute the Sale. Upon request, the cashier will execute the sale. A copy of the relevant information will be sent to the credit processor. When the credit processor approves the orders, the cashier will break the customer's order into individual merchant orders and forward them to the Merchants' Order Tracking server. The cashier will also post a record to the Ledger at this time.

2. Catalog—Houses product hierarchies. Conducts product searches.

The catalog is an arrangement of product information. The catalog server supports a hierarchical browsing mode and various searching functions. Its responsibilities are listed below:

Retrieve a catalog upon request. The catalog will include all content for a shopping experience. For products, the information will include the product description, price and options.

Retrieve a list of products matching a query. This will initially support simple keyword searching, but may be expanded to more sophisticated searching techniques.

3. Credit Processor—Conducts card validation and fraud screening.

The credit processor takes a candidate order and performs card authorization and fraud screening. The card processor cooperates with the order tracker to keep the status of the order updated.

Perform Credit Card Authorization. Contact the card processing vendor and authorize the card. Retrieve the Address Verification System (AVS) code for use in fraud screening.

Perform Fraud Screening. The system performs a fraud screening analysis based on the following factors: dollar amount of the order, AVS code, whether the billing and shipping address match, and whether the email address given is a free e-mail account.

4. Notifier—Sends messages.

The Notifier keeps track of who wants to be notified of what and how they should be notified. The notifier receives notification of various system events and takes the appropriate course of action. The appropriate course of action will depend upon the event and the party to be notified. For example, a merchant that does a high volume of sales and is

22

already integrated with the system may not wish to receive email notification of every order.

5. Ledger—Records and reports on all financial events.

The Ledger is a record of all financial events. The ledger contains interfaces for posting events and interfaces querying and inspecting the ledger. Responsibilities include:

Post an Order Event. The order event happens when the shopper confirms an order.

Post a Sale Event. The sale event occurs when a merchant marks the last item in an order shipped.

Post an Return Merchandise Authorization (RMA) Open Event/Post an RMA Completed Event/Post an RMA Canceled Event

Post a Journal Entry. This interface will be used to record non-standard events. The posted ledger entries must collectively have an equal number of debits and credits.

6. Order Tracker—Records and reports on order status.

This is the repository of order information. The order tracker includes a cashier's interface for creating a new order, a Merchant's interface for keeping the order status updated, and a Customer Service interface for checking on the status of the order and making relevant annotations.

Query Order Status. This method is used by purchaser to check on the status of a pending order.

Ship Order. This method is used by a merchant to document the parceling of an order into shipments.

7. Shopping Cart—Holds products that have been selected for purchase.

The shopping cart is simply a collection of Inventory Reservation documents that represent the items that have been selected by the shopper. The shopping cart includes methods for adding and removing Inventory Reservations and for inspecting the contents of the cart.

8. Warehouse—Inventory availability information. Product configuration interfaces.

The Warehouse represents a collection of physical items that are in stock. Responsibilities of the Warehouse are listed below:

Provide Information on Stock Levels of a Particular Item/Order Items Having Low Inventory Levels. This is an advanced capability by which inventory may be dynamically reserved from a merchant, based on the current inventory levels.

The warehouse will provide a blank Inventory Reservation document that will specify all of the product's configuration options.

Issue Reservations Against Inventory. A shopper will fill out an Inventory Reservation (which includes all configuration options) and submit it to the warehouse. If the item, as configured, is available, the reservation will be issued. This will serve to reserve the inventory for a fixed period of time.

Database Server Tier

Finally, the Database server tier is composed of a single software layer. This layer is responsible for low level manipulation of the data in the one or more databases. This tier may consist of multiple database servers. Using multiple servers is a major advantage for obvious reasons. The system's database chores can be distributed to many different servers. In a preferred embodiment, the database server is Object Design's Objectstore server. Objectstore supports a "warm failover" mode which allows a backup server to take over automatically if the primary should fail. An

US 6,993,572 B2

23

Microsoft SQL server is also used in the preferred embodiment to maintain financial records although properly configured another DBMS such as Objectstore or a commercially available accounting package could provide capability suitable for financial record keeping.

The foregoing discussion describes the primary actors interacting with a system according to the present invention. After identifying these actors, typical transaction flows through the system are presented.

There are three main parties in the outsourced e-commerce relationship, excluding the end consumer. These parties include Merchants, Hosts, and the e-commerce outsourcing provider. This folds into two parties where one party plays the dual role of Host and Merchant.

Merchants

Merchants are the producers, distributors, or resellers of the goods to be sold through the outsource provider. The primary responsibilities of a Merchant are to:

Maintain an up-to-date catalog within the system including all products that are available for sale in storefronts served by the outsource provider

Create approval standards for passively recruited Host applicants based upon website profiles and target audience characteristics

Fulfill all orders received from the e-commerce outsource provider

Provide assistance to outsource provider regarding promotional strategies. This can be accomplished by supplying marketing literature and materials, as well as any sales incentives. The Merchant owns the marketing literature and materials, and may access and modify these items as necessary.

Provide service and support to customers generated via the outsource e-commerce provider

Maintain internal records of orders filled through the outsource provider and process payments from the outsource provider for these orders

Inform the e-commerce outsource provider of any backlogs, fulfillment delays, product changes, or other significant situations

Hosts

A Host is the operator of a website that engages in Internet commerce by incorporating one or more link to the e-commerce outsource provider into its web content. The responsibilities of a Host are to:

Use the outsource provider Host Manager service bureau to select the Merchants and products that will be offered from the Host's website

Promote transactions through the e-commerce outsource provider hosted by the website

Regularly review the Merchant offerings for which they have been approved in order to take advantage of new products and to review sales and promotional strategies made available to them by the Merchant

E-Commerce Outsource Provider

The role of outsource provider is to:

Develop and maintain the outsource provider service bureau—the systems and software which provide the platform for e-commerce support services

Identify and recruit target Host websites and monitor/ manage these relationships

24

Create customer-transparent Host processing “pages” on a secure server to receive order and payment information

Create, maintain, and update the “look & feel capture” process through which consumers are able to shop in a Merchant-controlled storefront within the design and navigational context of the Host website, preserving the ownership of the visit experience by the Host

Authorize credit card transactions (in most cases)

Process credit card payments for orders received (in most cases)

Pay periodic commissions to Hosts for orders shipped during a prior period

Transmit orders to Merchants

Pay Merchants for orders filled

Manage the commission structure for Merchant-Host relationships to maximize sales and revenues

Screen and approve Host applications

Support and monitor the merchandise return/refund process and other customer service functions

This following describes the order entry and settlement process from the initial promotion on a Host website all the way through to fulfillment, payment processing, commission payment, and Merchant payment.

Order Placement, Fulfillment, and Settlement Overview

The overall transaction process is very straightforward. The following is a list of the steps involved in receiving and processing an order request.

a) A customer visits a Host website and, through contextually relevant content, becomes interested in a product offered.

b) The customer selects the item(s) that she wishes to purchase by clicking a product image, banner-style link, or text link, or other offer format taking her to a dynamically generated web pages which retain the look and feel of the referring Host and are served by the e-commerce outsource provider.

c) The customer browses through the products offered, indicating which items are to be purchased and in what quantities via forms on-screen. Selected items appear within the shopping cart at the top of the shopping interface. The user remains on the product screen without ever being involuntarily removed to a detailed shopping cart-only screen, representing a significant enhancement over most shopping cart technology in place today. When all desired products are selected, the customer initiates the checkout procedure, never leaving the Host website.

d) The secure checkout interface appears, still consistent in look and feel with the Host's referring website. The customer completes the order form, provides all billing and shipping information required, confirms the items selected for purchase, and remits credit card information for payment processing.

e) Assuming the payment method is authorized, the customer is returned to another section of the Host's website, possibly just returning to the page in which the offer was placed, as determined by the Host.

f) The e-commerce outsource provider passes the order to the Merchant in real time. The credit card may be charged at this point or upon confirmation of shipment.

g) The Merchant receives and logs the order.

h) The Merchant then assembles and ships the order to the customer, keeping the outsource provider apprised of the order status.

i) Periodically, the outsource provider will remit payment to the Merchant for that period's filled orders.

US 6,993,572 B2

25

- j) Periodically, the outsource provider will remit payment to Hosts for all commissions earned in the prior period.

Host Process Flow

The process flow for a prospect to become a Host and be fully able to endorse/promote/offer Merchant products is as follows:

- a) Hosts are recruited from three sources: direct recruiting, in which the Host prospect is identified by and approached by an e-commerce outsource provider representative; passive recruiting, in which the Host has been referred to the outsource provider by other Hosts, relevant meta-sites (sites that contain lists of and links to other sites/services), or other sources; and Host Agent recruits, in which a specialized third party Agent identifies and approaches Host prospects. In many cases, the use of online signup forms and brochures may be a factor in recruitment.
- b) Prospect completes the Host application form (except where preapproved), providing information about the type of website(s) operated by the Host, some traffic statistics about these websites and general visitor demographics, and complete contact information. The prospect also selects an outsource provider system user ID and password which will later be used to access the system, retrieve important Hosting information and programming, and modify the custom materials in the outsource provider transaction processing engine.
- c) The application is received and the information therein is reviewed, and the application is either approved or rejected (unless this is a preapproved Host). If approved, the Host's ID and password are activated, and an automated message is sent to the new Host informing them of their approval. This message will also contain instructions for accessing the e-commerce outsource provider system, setting up their links to the outsource provider, and inserting outsource provider data into their website(s). Preapproved Hosts will be immediately able to access this system upon submission of their application.
- d) Host accesses e-commerce outsource provider system to begin the step-by-step setup process. The Host first identifies a page from their own website which will provide the look and feel to be replicated. Following this, the Host configures product selections for each of its approved Merchants and downloads product images, text, and CGI/HTML code for their own website. Host then completes changes to website and activates new content. Hosts are free to promote their use of the outsource provider as they feel is suitable to the product at any time and with any frequency, subject to reasonable limitations.
- e) Hosts will be able to access real-time reports about transaction volume including number of users, average purchase amount per user, number of purchases on specified days or within specified date ranges. Hosts can create customized reports to determine conversion rates, top selling products, commissions earned, paid, and due, and other pertinent information. This information can be leveraged by the e-commerce outsource provider and the Host to improve the efficacy of targeted marketing efforts on the Host's website.

Internal System Transaction Flow

The e-commerce outsource provider system acts as a clearinghouse for all orders. The system maintains a real-time interface with a credit card authorization and processing service and a robust database engine which is able to process transactions, record all transaction activities, generate reports used for commission payments and auditing of

26

Merchant invoices, and track order status. The transaction flow for the outsource provider service bureau is directly related to the structure of the underlying database.

This flow can be described as follows:

- a) Customer, visiting Host, activates link to commerce object within context of Host's website. This activation is typically accomplished by clicking on a hyperlink of some kind within a webpage of the Host's website.
- b) The e-commerce outsource provider launches new storefront featuring specific products or product category for Merchant, as determined by Host, with the look and feel of the Host's site. The user is not made aware of the fact that this shopping experience is taking place on an out-sourced server.
- c) As customer browses through featured items in the Merchant's catalog, the outsource provider serves additional pages while maintaining the look and feel of the Host. The system maintains a dynamic record of customers activities including products reviewed, items selected for purchase (placed into shopping cart), and time spent shopping. The e-commerce outsource provider uses a highly reliable and accurate tracking technology throughout the shopping experience.
- d) Upon checkout, the system processes customer billing, shipping, and order information via secure (encrypted) data transmission (unless the consumer opts for non-encrypted transmission). This process includes an order confirmation process and a process by which a non-approved credit card transaction may be corrected and resubmitted.
- e) Upon approval, the outsource provider performs several simultaneous functions:
 - Thank you screen is displayed to customer
 - Customer is prompted to "continue" browsing Host's website.
 - E-mail confirmation is sent to customer detailing order information, fulfillment process, customer service terms and procedures, and other relevant information.
 - Order is transmitted to the Merchant electronically, via e-mail or direct link to order entry system.
 - Order is logged into transaction database and logged by system in conjunction with Host referral information.
 - Host is notified that a sale has been made and commission dollars have been earned.
- The second part of the e-commerce outsource provider service bureau transaction process pertains to reconciliation and settlement with the Merchants.
 - a) Orders are transmitted to each Merchant as received and are logged into the system for future reference and reporting.
 - b) Periodically, the outsource provider will pay each Merchant for orders processed during the prior period. Payment will be driven by shipped orders as recorded within the system. Merchants can view their accumulated sales within the system at any time during the period, and historical information will be available as well.
- The final part of the e-commerce outsource provider Service Bureau transaction process pertains to the payment of commissions to Hosts.
 - c) Periodically, the e-commerce outsource provider will calculate the accumulated commissions due to each Host from the prior period's results. Hosts will be able to review their earnings on a real-time basis at any point during a period.
 - d) The outsource provider will then pay each Host the appropriate commission amount via electronic payment

US 6,993,572 B2

27

or check along with a copy of the transactions and total report for the period being settled.

Merchant Transaction Flow

Each Merchant will be required to fulfill every order received through the e-commerce outsourcing provider within a designated time frame. Merchants must also be able to track certain information regularly and accurately. Merchants will be monitored to ensure timely fulfillment in order to provide the best quality customer service.

The steps of the Merchants transaction flow after the system has been established within the system are as follows:

- a) The designated recipient of orders within the Merchant organization will check for new orders at least on a daily basis, if not more frequently. Orders are received by the Merchant via e-mail or other electronic notification, including automated direct input to legacy order management systems owned or operated by the Merchant. These orders include all pertinent customer data required for fulfillment of each order. Merchants may also view all orders online, sorted by date, status (new/viewed), or other criteria, and download orders in bulk form directly from the outsource provider.
- b) After receiving the order, the Merchant will ship the order to the Customer within a reasonable time period for the type of merchandise ordered. Merchant will have the ability to modify the shipping status of the orders within the system. Merchants are obligated to provide timely shipping of their products. If any item ordered is out of stock or discontinued, the Merchant must update their catalog on the e-commerce outsource provider immediately and notify any affected customers immediately via e-mail or regular mail. Orders should be processed according to whatever internal process flow has been established by the Merchant.
- c) Upon receipt of payment for the prior month's orders, the Merchant is responsible for reconciling the amount remitted with their own fulfillment records. Any disputes should be addressed by accessing the Merchant interface and querying/updating records.

The embodiments described above are given as illustrative examples only. It will be readily appreciated that many deviations may be made from the specific embodiment disclosed in this specification without departing from the invention. Accordingly, the scope of the invention is to be determined by the claims below rather than being limited to the specifically described embodiment above.

What is claimed is:

1. An e-commerce outsourcing process comprising:
 - a) capturing a look and feel description associated with a host website and storing HTML code corresponding to the look and feel description at a second website;
 - b) providing the host website with a link for inclusion within a page on the host website for serving to a visitor computer, wherein the provided link correlates the host website with a selected commerce object; and
 - c) upon receiving an activation of the provided link from the visitor computer, serving to the visitor computer from the second website page with a look and feel description corresponding to the captured look and feel description of the host website associated with the provided link and with content based on the commerce object associated with the provided link;

whereby the visitor receiving the served page at the visitor computer perceives the page as associated with the host website even though it is served from the second website.

28

2. The process of claim 1, wherein the selected commerce object is an indicator for dynamic content selection.

3. The process of claim 2, wherein the content within the served page is dynamically selected according to contextual information derived from the page on the host website including the provided link.

4. The process of claim 1, wherein the selected commerce object is a selected product.

5. The process of claim 1, wherein the selected commerce
10 object is a selected product category.

6. The process of claim 1 wherein capturing a look and feel description associated with a host website comprises:

- a) receiving an identification for an example page from a target website;

- b) retrieving the example page via a communication link to the target website;

- c) identifying look and feel elements within the retrieved example page; and

- d) storing the identified look and feel elements as a look and feel description associated with the target website in a data store.

7. The process of claim 1 wherein capturing a look and feel description associated with a host website comprises:

- a) receiving a URL reference to an example page of a target website in an input field of a computer program;
- and

- b) receiving with the computer program selections of HTML code encoding the identified look and feel elements.

8. An e-commerce outsourcing system comprising:

- a) a data store including a look and feel description associated with a host website;

- b) a communication link to a visitor computer; and

- c) a processor for executing instructions that perform the steps of:

- i) capturing a look and feel description associated with a host website;

- ii) storing the captured look and feel description in the data store;

- iii) providing the host website with a link for inclusion within a page on the host website correlating the host website with a selected commerce object; and

- iv) upon receiving an activation of the provided link via the communication link, serving an e-commerce supported page via the communication link with a look and feel based on the look and feel description in the data store and with content based on the commerce object associated with the provided link; whereby a visitor receiving the served page at the visitor computer perceives the page as associated with the host website even though it is served from the data store.

9. The process of claim 8, wherein the selected commerce object is an indicator for dynamic content selection.

10. The process of claim 9, wherein the content within the sewed page is dynamically selected according to contextual information derived from the page on the host website including the provided link.

11. The system of claim 8, wherein the data store further includes a product record and wherein the selected commerce object is a selected product record.

- 12.** The process of claim **8**, wherein the data store further includes a product category record and wherein the selected commerce object is a selected product category record.

US 6,993,572 B2

29

13. An e-commerce outsourcing system comprising:
- a) a data store including a look and feel description associated with a host web page having a link correlated with a commerce object; and
 - b) a computer processor coupled to the data store and in communication through the Internet with the host web page and programmed, upon receiving an indication that the link has been activated by a visitor computer in Internet communication with the host web page, to serve a composite web page to the visitor computer with a look and feel based on the look and feel description in the data store and with content based on the commerce object associated with the link.
14. A method for serving pages containing dynamically selected content, comprising:
- a) receiving the activation of a link on a web page designated for dynamic content selection via a communication link from a visitor computer;
 - b) retrieving the web page containing the activated link;
 - c) automatically selecting content from a content data store based upon analysis of the content of the retrieved web page;
 - d) automatically constructing a web page containing a combination of the selected content and a look and feel corresponding to the retrieved web page; and
 - e) serving the constructed page to the visitor computer via the communication link.
15. The method of claim 14 wherein analysis of the content of the retrieved web page comprises identification of keywords marked in the retrieved web page.
16. The method of claim 14 wherein analysis of the content of the retrieved web page comprises counting the frequency of keywords on the retrieved web page.
17. An e-commerce outsourcing process comprising the steps of:
- a) storing a look and feel description associated with a first website in a data store associated with a second website;
 - b) including within a web page of the first website, which web page has a look and feel substantially corresponding to the stored look and feel description, a link correlating the web page with a commerce object; and
 - c) upon receiving an activation of the link from a visitor computer to which the web page has been served, serving to the visitor computer from the second website a composite web page having a look and feel corresponding to the stored look and feel description of the first website and having content based on the commerce object associated with the link.
18. The process of claim 17 wherein the look and feel description comprises data defining the appearance of the top and left side of at least some of the web pages of the first website.
19. The process of claim 17 wherein the look and feel description comprises data defining the appearance of the header and footer of at least some of the web pages of the first website.
20. The process of claim 17 wherein the look and feel description comprises data defining a set of navigational links, used on at least some of the web pages of the first website, each of which links link to specific web pages of the first website.

30

21. The process of claim 17 wherein the look and feel description comprises data defining:
- a) a logo associated with and displayed on at least some of the web pages of the first website;
 - b) a color scheme used on at least some of the web pages of the first website;
 - c) a page layout used on at least some of the web pages of the first website; and
 - d) navigational links, used on at least some of the web pages of the first website, each of which links link to specific web pages of the first website.
22. The process of claim 17 wherein storing a look and feel description associated with a first website in a data store associated with a second website comprises designing a first website, identifying look and feel descriptions associated therewith, and storing the identified look and feel descriptions in the data store associated with the second website.
23. The process of claim 17 wherein the commerce object is a set of product categories and further comprising accepting search parameters through the composite web page and using said parameters to search for specific products within the product categories.
24. The process of claim 17 further comprising storing at the second website data concerning a plurality of commerce objects.
25. The process of claim 24 further comprising contracting with merchants offering products or services for sale to include data concerning the commerce objects of said merchants at the second website.
26. The process of claim 17 further comprising, after part (c), responsive to an indication received from the visitor computer of a desire to purchase a product or service identified in the content based on the commerce object and served in the composite web page, capturing billing information from the visitor computer and passing captured billing information to a merchant offering the indicated product or service.
27. The process of claim 17 wherein the commerce object is a set of product categories, each comprising a plurality of products or services, and further comprising:
- a) before serving the composite web page to the visitor computer:
 - i) contracting with merchants offering the products or services for sale to include data concerning the commerce objects of said merchants at the second website, and
 - ii) storing at the second website data concerning the plurality of products or services; and
 - b) after serving the composite web page to the visitor computer:
 - i) accepting search parameters through the composite web page and using said parameters to search for specific ones of the plurality of products or services within the product categories, and
 - ii) responsive to an indication received from the visitor computer of a desire to purchase one of the plurality of products or services identified through the search, capturing billing information from the visitor computer and passing captured billing information to the merchant offering the indicated product or service.

* * * * *